HDR-CX6EK/CX7/CX7E/CX7K/CX7EK

RMT-835

SERVICE MANUAL

LEVEL 2

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Hong Kong Model
Chinese Model
Korea Model
Tourist Model
Japanese Model

Ver. 1.2 2007.11
Revision History

Revised-1

Replace the previously issued SERVICE MANUAL 9-852-210-31 with this Manual.

Photo: HDR-CX7

Link

SPECIFICATIONS	DISASSEMBLY	SCHEMATIC DIAGRAMS
MODEL INFORMATION TABLE	BLOCK DIAGRAMS	PRINTED WIRING BOARDS
SERVICE NOTE	FRAME SCHEMATIC DIAGRAM	REPAIR PARTS LIST

- Precaution on Replacing the VC-493 Board
- Precaution on Replacing the Holder (MS)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MEMORY STICK ™

DIGITAL HD VIDEO CAMERA RECORDER

SONY®

HDR-CX6EK/CX7/CX7E/CX7K/CX7EK_L2
9-852-210-32

Sony EMCS Co.

2007K0500-1

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Published by Kohda TEC

These specifications are extracted from instruction manual of HDR-CX6EK/CX7E/CX7EK.

ENGLISH | JAPANESE

SPECIFICATIONS

System

Video compression format
AVCHD (HD)/MPEG2 (SD)/JPEG (Still images)

Audio compression format
Dolby Digital 2/5.1ch
Dolby Digital 5.1 Creator

Video signal
PAL color, CCIR standards
1080/50i specification

Recording format
Movie (HD): AVCHD 1080/50i
Movie (SD): MPEG2-PS
Still image: Exif Ver.2.2*1

Image device
6.3 mm (1/2.9 type) CMOS sensor
Recording pixels (still image, 4:3):
Max. 6.1 mega (2 848 × 2 136) pixels*2
Gross: Approx. 3 200 000 pixels
Effective (movie, 16:9):
2 280 000 pixels
Effective (movie, 4:3):
1 710 000 pixels
Effective (still image, 16:9):
2 280 000 pixels
Effective (still image, 4:3):
3 040 000 pixels

Lens
Carl Zeiss Vario-Sonnar T*
10 × (Optical), 20 × (Digital)

Focal length
F1.8 ~ 2.9
Filter diameter: 37 mm (1 1/2 in.)
f=5.4 ~ 54 mm (7/32 ~ 2 1/4 in.) When converted to a 35 mm still camera
For movies: 40 ~ 400 mm (1 5/8 ~ 15 3/4 in.) (16:9), 49 ~ 490 mm (1 15/16 ~ 19 3/8 in.) (4:3)
For still images: 40 ~ 400 mm (1 5/8 ~ 15 3/4 in.) (16:9), 37 ~ 370 mm (1 1/2 ~ 14 5/8 in.) (4:3)

Color temperature
[AUTO], [ONE PUSH],
[INDOOR] (3 200 K),
[OUTDOOR] (5 800 K)

Minimum illumination
2 lx (lux) ([AUTO SLW SHUTTR] [ON], Shutter speed 1/25 sec)
0 lx (lux) (during NightShot function)

*1 "Exif" is a file format for still images, established by the JEITA (Japan Electronics and Information Technology Industries Association). Files in this format can have additional information such as your camcorder's setting information at the time of recording.

*2 The unique pixel array of Sony's ClearVid CMOS sensor and image processing system (new Enhanced Imaging Processor) allows still image resolution equivalent to the sizes described.

Input/Output connectors

Audio/Video output
10-pin connector
Video signal: 1 Vp-p, 75 Ω (ohms)
Luminance signal: 1 Vp-p, 75 Ω (ohms)
Chrominance signal: 0.3 Vp-p, 75 Ω (ohms)
Audio signal: 327 mV (at load impedance 47 kΩ (kilohms)), Output impedance with less than 2.2 kΩ (kilohms)

HDMI OUT jack
HDMI Type C mini connector

LCD screen

Image
6.7 cm (2.7 type, aspect ratio 16:9)

Total dot number
211 200 (960 × 220)

General

Power requirements
DC 6.8 V/7.2 V (battery pack)
DC 8.4 V (AC Adaptor)

Average power consumption
During camera recording using the LCD with normal brightness:
HD: 4.3 W
SD: 3.8 W

Operating temperature
0 °C to + 40 °C (32 °F to 104 °F)

Storage temperature
-20 °C to + 60 °C (-4 °F to + 140 °F)

Dimensions (approx.)
69 × 67 × 129 mm
(2 3/4 × 2 3/4 × 5 1/8 in.) (w/h/d) including the projecting parts
69 × 67 × 131 mm
(2 3/4 × 2 3/4 × 5 1/4 in.) (w/h/d) including the projecting parts, and the NP-FH60 rechargeable battery pack attached

Mass (approx.)
370 g (13 oz) main unit only
450 g (15 oz) including the NP-FH60 rechargeable battery pack, and a "Memory Stick PRO Duo"

Handycam Station DCRA-C191

Input/Output connectors

Audio/Video output
10 pin connector
Video signal: 1 Vp-p, 75 Ω (ohms)
Luminance signal: 1 Vp-p, 75 Ω (ohms)
Chrominance signal: 0.3 Vp-p, 75 Ω (ohms)
Audio signal: 327 mV (at load impedance 47 kΩ (kilohms)), Output impedance with less than 2.2 kΩ (kilohms)

COMPONENT OUT jack
Y: 1 Vp-p, 75 Ω (ohms)
PB/PR, CB/CR: +/- 350 mV, 75 Ω (ohms)

USB jack
mini-B
HDR-CX6EK: You cannot input signals to your camcorder through this jack.

AC Adaptor AC-L200/L200B

Power requirements
AC 100 V - 240 V, 50/60 Hz

Current consumption
0.35 - 0.18 A

Power consumption
18 W

Output voltage
DC 8.4 V*

Operating temperature
0 °C to + 40 °C (32 °F to 104 °F)

Storage temperature
-20 °C to + 60 °C (-4 °F to + 140 °F)

Dimensions (approx.)
48 × 29 × 81 mm
(1 15/16 × 1 3/16 × 3 1/4 in.) (w/h/d) excluding the projecting parts

Mass (approx.)
170 g (6.0 oz) excluding the mains lead

* See the label on the AC Adaptor for other specifications.

Rechargeable battery pack NP-FH60

Maximum output voltage
DC 8.4 V

Output voltage
DC 7.2 V

Capacity
7.2 Wh (1 000 mAh)

Dimensions (approx.)
31.8 × 33.3 × 45.0 mm
(1 5/16 × 1 5/16 × 1 13/16 in.) (w/h/d)

Mass (approx.)
80 g (2.9 oz)

Operating temperature
0 °C to + 40 °C (32 °F to 104 °F)

Type
Lithium ion

Design and specifications are subject to change without notice.

- Your camcorder is produced under the license of Dolby Laboratories.

These specifications are extracted from instruction manual of HDR-CX7/CX7K.

ENGLISH | JAPANESE

SPECIFICATIONS

System

Video compression format
AVCHD (HD)/MPEG2 (SD)/JPEG (Still images)

Audio compression format
Dolby Digital 2/5.1ch
Dolby Digital 5.1 Creator

Video signal
NTSC color, EIA standards
1080/60i specification

Recording format
Movie (HD): AVCHD 1080/60i
Movie (SD): MPEG2-PS
Still image: Exif Ver.2.2*1

Image device
6.3 mm (1/2.9 type) CMOS sensor
Recording pixels (still image, 4:3):
Max. 6.1 mega (2 848 × 2 136) pixels*2
Gross: Approx. 3 200 000 pixels
Effective (movie, 16:9):
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1 710 000 pixels
Effective (still image, 16:9):
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Effective (still image, 4:3):
3 040 000 pixels

Lens
Carl Zeiss Vario-Sonnar T*
10 × (Optical), 20 × (Digital)

Focal length
F1.8 ~ 2.9
Filter diameter: 37 mm (1 1/2 in.)
f=5.4 ~ 54 mm (7/32 ~ 2 1/4 in.) When converted to a 35 mm still camera
For movies: 40 ~ 400 mm (1 5/8 ~ 15 3/4 in.) (16:9), 49 ~ 490 mm (1 15/16 ~ 19 3/8 in.) (4:3)
For still images: 40 ~ 400 mm (1 5/8 ~ 15 3/4 in.) (16:9), 37 ~ 370 mm (1 1/2 ~ 14 5/8 in.) (4:3)

Color temperature
[AUTO], [ONE PUSH], [INDOOR] (3 200 K), [OUTDOOR] (5 800 K)

Minimum illumination
2 lx (lux) ([AUTO SLW SHUTTR] [ON], Shutter speed 1/30 sec)
0 lx (lux) (during NightShot function)

*1 "Exif" is a file format for still images, established by the JEITA (Japan Electronics and Information Technology Industries Association). Files in this format can have additional information such as your camcorder's setting information at the time of recording.

*2 The unique pixel array of Sony's ClearVid CMOS sensor and image processing system (new Enhanced Imaging Processor) allows still image resolution equivalent to the sizes described.

Input/Output connectors

Audio/Video output
10-pin connector
Video signal: 1 Vp-p, 75 Ω (ohms)
Luminance signal: 1 Vp-p, 75 Ω (ohms)
Chrominance signal: 0.286 Vp-p, 75 Ω (ohms)
Audio signal: 327 mV (at load impedance 47 kΩ (kilohms)), Output impedance with less than 2.2 kΩ (kilohms)

HDMI OUT jack
HDMI Type C mini connector

LCD screen

Image
6.7 cm (2.7 type, aspect ratio 16:9)

Total dot number
211 200 (960 × 220)

General

Power requirements
DC 6.8 V/7.2 V (battery pack)
DC 8.4 V (AC Adaptor)

Average power consumption
During camera recording using the LCD with normal brightness:
HD: 4.4 W
SD: 3.8 W

Operating temperature
0 °C to + 40 °C (32 °F to 104 °F)

Storage temperature
-20 °C to + 60 °C (-4 °F to + 140 °F)

Dimensions (approx.)
69 × 67 × 129 mm
(2 3/4 × 2 3/4 × 5 1/8 in.) (w/h/d)
including the projecting parts
69 × 67 × 131 mm
(2 3/4 × 2 3/4 × 5 1/4 in.) (w/h/d)
including the projecting parts, and the NP-FH60 rechargeable battery pack attached

Mass (approx.)
370 g (13 oz) main unit only
450 g (15 oz) including the NP-FH60 rechargeable battery pack, and a "Memory Stick PRO Duo"

Handycam Station DCRA-C191

Input/Output connectors

Audio/Video output
10 pin connector
Video signal: 1 Vp-p, 75 Ω (ohms)
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Chrominance signal: 0.286 Vp-p, 75 Ω (ohms)
Audio signal: 327 mV (at load impedance 47 kΩ (kilohms)), Output impedance with less than 2.2 kΩ (kilohms)

COMPONENT OUT jack
Y: 1 Vp-p, 75 Ω (ohms)
PB/PR, CB/CR: +/- 350 mV, 75 Ω (ohms)

USB jack
mini-B

AC Adaptor AC-L200/L200B

Power requirements
AC 100 V - 240 V, 50/60 Hz

Current consumption
0.35 - 0.18 A

Power consumption
18 W

Output voltage
DC 8.4 V*

Operating temperature
0 °C to + 40 °C (32 °F to 104 °F)

Storage temperature
-20 °C to + 60 °C (-4 °F to + 140 °F)

Dimensions (approx.)
48 × 29 × 81 mm
(1 15/16 × 1 3/16 × 3 1/4 in.) (w/h/d)
excluding the projecting parts

Mass (approx.)
170 g (6.0 oz) excluding the power cord

* See the label on the AC Adaptor for other specifications.

Rechargeable battery pack NP-FH60

Maximum output voltage
DC 8.4 V

Output voltage
DC 7.2 V

Capacity
7.2 Wh (1 000 mAh)

Dimensions (approx.)
31.8 × 33.3 × 45.0 mm
(1 5/16 × 1 5/16 × 1 13/16 in.) (w/h/d)

Mass (approx.)
80 g (2.9 oz)

Operating temperature
0 °C to + 40 °C (32 °F to 104 °F)

Type
Lithium ion

Design and specifications are subject to change without notice.

- Your camcorder is produced under the license of Dolby Laboratories.

自己診断搭載機種 HANDYCAM AVCHD InfoLITHIUM H SERIES HDMI

概略仕様

システム

映像圧縮方式
AVCHD(HD)/MPEG2(SD)/JPEG(静止画)

音声圧縮方式
Dolby Digital2/5.1ch
ドルビーデジタル5.1クリエーター搭載

映像信号
NTSCカラー、EIA標準方式
1080/60i方式

動画記録方式
動画HD: AVCHD 1080/60i
動画SD: MPEG2-PS

静止画記録方式
Exif Ver.2.2*1

撮像素子
6.3mm(1/2.9型)CMOSセンサー
記録画像数:静止画時最大610万画素相当*2
(2 848×2 136)(4:3時)
総画素数:約320万画素
動画時有効画素数(16:9モード):約228万画素
動画時有効画素数(4:3モード):約171万画素
静止画時有効画素数(16:9モード):約228万画素
静止画時有効画素数(4:3モード):約304万画素

ズームレンズ
カール ツァイス バリオゾナーT*
10倍(光学)、20倍(デジタル)
フィルター径37mm
F1.8〜2.9
f=5.4〜54mm
35mmカメラ換算では
動画撮影時:
40〜400mm(16:9モード)
(4:3モードでは49〜490mm)
静止画撮影時:
40〜400mm(16:9モード)
(4:3モードでは37〜370mm)

色温度切り換え
[オート]、[ワンプッシュ]、[屋内](3 200 K)、[屋外](5 800 K)

最低被写体照度
5 lx(ルクス)([オートスロシャッタ][入]、[シャッタースピード]1/30秒)
0 lx(ルクス)(NightShot時)

*1 (社)電子情報技術産業協会(JEITA)にて制定された、撮影情報などの付帯情報を追加することができる静止画用のファイルフォーマット。

*2 ソニー独自のクリアビッドCMOSセンサーの画素配列と画像処理システム新エンハンスドイメージングプロセッサーにより、静止画は表記の記録サイズを実現しています。

入/出力端子

A/V OUT端子
10ピン特殊コネクター
映像:1 Vp-p、75 Ω
Y出力 1 Vp-p、75 Ω
C出力 0.286 Vp-p、75 Ω
音声:327 mV(47 kΩ負荷時)、出力インピーダンス2.2 kΩ以下

HDMI OUT端子
HDMIタイプCミニ端子

液晶画面

画面サイズ
6.7 cm(2.7型、アスペクト比16:9)

総ドット数
211 200ドット
横960×縦220

電源部、その他

電源電圧
バッテリー端子入力 6.8 V/7.2 V
DC端子入力 8.4 V

消費電力
液晶画面の明るさ標準:
HD 4.4 W、SD 3.8 W

動作温度
0℃〜+40 ℃

保存温度
−20℃〜+60 ℃

外形寸法
69×67×129 mm
(突起部を含む)
(幅×高さ×奥行き)
69×67×131 mm
(突起部含む、付属バッテリーパックNP-FH60装着状態)
(幅×高さ×奥行き)

本体質量
約370 g(本体のみ)

撮影時総質量
約450 g(バッテリーパックNP-FH60、"メモリースティック PRO デュオ"含む)

ハンディカムステーション DCRA-C190

入/出力端子

A/V OUT端子
10ピン特殊コネクター
映像:1 Vp-p、75 Ω
Y出力 1 Vp-p、75 Ω
C出力 0.286 Vp-p、75 Ω
音声:327 mV(47 kΩ負荷時)、出力インピーダンス2.2 kΩ以下

COMPONENT OUT端子
D1/D3映像:コンポーネントビデオ端子
Y:1 Vp-p、75 Ω
P_B/P_R, C_B/C_R: ±350 mV, 75 Ω

USB端子
mini-B

ACアダプター AC-L200/L200B

電源
AC 100 V−240 V、50/60 Hz

消費電力
18 W

定格出力
DC 8.4 V *

動作温度
0 ℃〜+40 ℃

保存温度
−20 ℃〜+60 ℃

外形寸法
約 48×29×81 mm
(最大突起部をのぞく)
(幅×高さ×奥行き)

質量
約170 g(本体のみ)

* その他の仕様については AC アダプターのラベルをご覧ください。

リチャージャブルバッテリーパック NP-FH60

最大電圧
DC 8.4 V

公称電圧
DC 7.2 V

容量
7.2 Wh(1 000 mAh)

最大外形寸法
約31.8×33.3×45.0 mm
(幅×高さ×奥行き)

質量
約80 g

使用温度
0 ℃〜+40 ℃

使用電池
Li-ion

本機の仕様および外観は、改良のため予告なく変更することがありますが、ご了承ください。

- ドルビーラボラトリーズからの実施権に基づき製造されています。

Model information table

Model		HDR-CX6EK	HDR-CX7	HDR-CX7E	HDR-CX7K	HDR-CX7EK
Destination		AEP, UK	US, CND, J	CH	E, KR, JE	AEP, E, AUS, HK, JE
Color system		PAL	NTSC	PAL	NTSC	PAL
Data copy	CAM → PC	○	○	○	○	○
	PC → CAM	×	○	○	○	○
Supplied accessory “Memory Stick PRO Duo”		○	×	×	○	○

- Abbreviation
  AR : Argentine model
  AUS : Australian model
  BR : Brazilian model
  CH : Chinese model
  CND : Canadian model
  EE : East European model
  HK : Hong Kong model
  J : Japanese model
  JE : Tourist model
  KR : Korea model
  MX : Mexican model
  NE : North European model

CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
   - Keep the temperature of the soldering iron around 270˚C during repairing.
   - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
   - Be careful not to apply force on the conductor when soldering or unsoldering.

Unleaded solder

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

注意
電池の交換は，正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

サービス，点検時には次のことにご注意下さい。

1. 注意事項をお守りください。
   サービスのとき特に注意を要する個所については，キャビネット，シャーシ，部品などにラベルや捺印で注意事項を表示しています。これらの注意書き及び取扱説明書等の注意事項を必ずお守り下さい。
2. 指定部品のご使用を
   セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は，使用されていたものと同じ特性の部品を使用して下さい。特に回路図，部品表に⚠印で指定されている安全上重要な部品は必ず指定のものをご使用下さい。
3. 部品の取付けや配線の引きまわしはもとどおりに
   安全上，チューブやテープなどの絶縁材料を使用したり，プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランパによって発熱部品や高圧部品に接近しないよう配慮されていますので，これらは必ずもとどおりにして下さい。
4. サービス後は安全点検を
   サービスのために取外したネジ，部品，配線がもとどおりになっているか，またサービスした個所の周辺を劣化させてしまったところがないかなどを点検し，安全性が確保されていることを確認して下さい。
5. チップ部品交換時の注意
   - 取外した部品は再使用しないで下さい。
   - タンタルコンデンサのマイナス側は熱に弱いため交換時は注意して下さい。
6. フレキシブルプリント基板の取扱いについて
   - コテ先温度を270℃前後にして行なって下さい。
   - 同一パターンに何度もコテ先を当てないで下さい。（3回以内）
   - パターンに力が加わらないよう注意して下さい。
7. 無鉛半田について
   無鉛半田を使用している基板には，無鉛（Lead Free）を意味するレッドフリーマークがプリントされています。
   （注意：基板サイズによっては，無鉛半田を使用していてもレッドフリーマークがプリントされていないものがあります）
   ：レッドフリーマーク
   無鉛半田には，以下の特性があります。
   - 融点が従来の半田よりも約40℃高い。
     従来の半田こてをそのまま使用することは可能ですが，少し長めにこてを当てる必要があります。
     温度調節機能のついた半田こてを使用する場合，約350℃に設定して下さい。
     注意：半田こてを長く当てすぎると，基板のパターン（銅箔）がはがれてしまうことがありますので，注意して下さい。
   - 粘性が強い
     従来の半田よりも粘性が強いため，IC端子などが半田ブリッジしないように注意して下さい。
   - 従来の半田と混ぜて使用可能
     無鉛半田には無鉛半田を追加するのが最適ですが，従来の半田を追加しても構いません。

1. SERVICE NOTE

ENGLISH JAPANESE

1-1. POWER SUPPLY DURING REPAIRS

In this unit, about 10 seconds after power is supplied to the battery terminal using the regulated power supply (8.4 V), the power is shut off so that the unit cannot operate.
These following method is available to prevent this.

Method:
Use the AC power adaptor (AC-L200/L200B).

1-2. PRECAUTION ON REPLACING THE VC-493 BOARD

DESTINATION DATA
When you replace to the repairing board, the written destination data of repairing board also might be changed to original setting.
Refer to Service Manual ADJ, and perform “DESTINATION DATA WRITE”.

USB SERIAL No.
The set is shipped with a unique ID (USB Serial No.) written in it.
This ID has not been written in a new board for service, and therefore it must be entered after the board replacement.
Refer to Service Manual ADJ, and perform “USB SERIAL No. INPUT”.

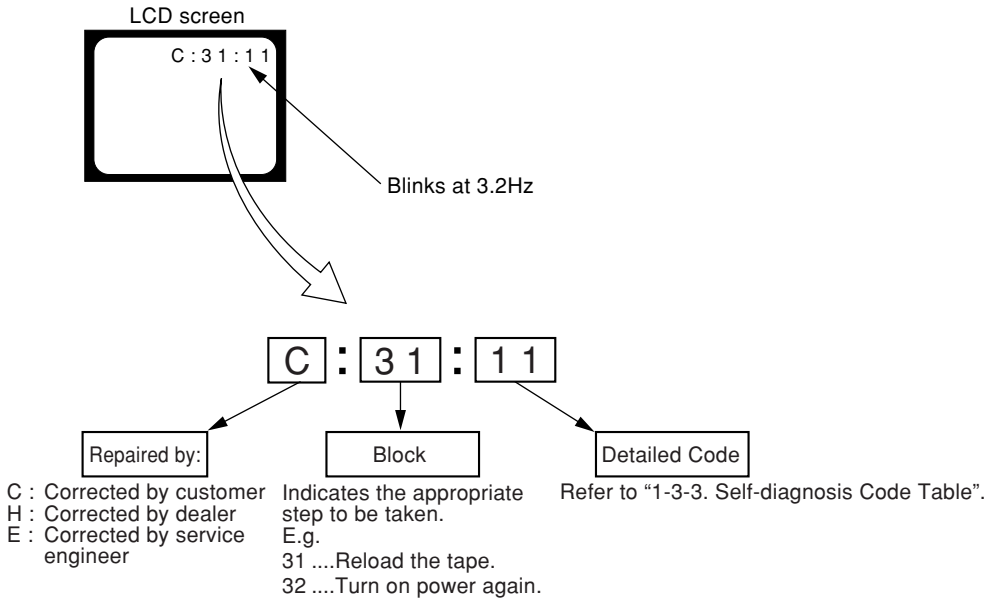
1-3. SELF-DIAGNOSIS FUNCTION

1-3-1. Self-diagnosis Function

When problems occur while the unit is operating, the self-diagnosis function starts working, and displays on the LCD screen what to do.
Details of the self-diagnosis functions are provided in the Instruction manual.

1-3-2. Self-diagnosis Display

When problems occur while the unit is operating, the counter of the LCD screen shows a 4-digit display consisting of an alphabet and numbers, which blinks at 3.2 Hz. This 5-character display indicates the “repaired by:”, “block” in which the problem occurred, and “detailed code” of the problem.


LCD screen
C : 3 1 : 1 1
Blinks at 3.2Hz
C : 31 : 11
Repaired by:
Block
Detailed Code
C : Corrected by customer
H : Corrected by dealer
E : Corrected by service engineer
Indicates the appropriate step to be taken.
E.g.
31 ....Reload the tape.
32 ....Turn on power again.
Refer to “1-3-3. Self-diagnosis Code Table”.

1-3-3. Self-diagnosis Code Table

Self-diagnosis Code					Symptom/State	Correction
Repaired by:	Block Function		Detailed Code			
C	0	4	0	0	Non-standard battery is used.	Use the InfoLITHIUM battery.
C	1	3	0	1	"Memory Stick Duo" is unformatted. "Memory Stick Duo" is broken.	Format the "Memory Stick Duo". Insert a new "Memory Stick Duo".
C	1	3	0	2	Access error	Remove the power source. Reconnect it again and operate your camcorder again.
C	3	2	6	0	Difficult to adjust forcus (Cannot initialize focus)	Retry turn the power on by the power switch. If it does not recover, check the focus MR sensor of lens block (pin ⑯, ⑱ of CN5302 on the LD-222 board). If it is OK, check the focus motor drive IC (IC5404 on the LD-222 board).
E	2	0	0	0	EEPROM data are rewritten.	Make EEPROM data correct value.
E	6	1	1	0	Zoom operations fault (Cannot initialize zoom lens.)	Inspect the lens block zoom MR sensor (pin ⑳, ㉑ of CN5302 on the LD-222 board) when zooming is performed when the zoom lever is operated, and the zoom motor drive circuit (IC5404 on the LD-222 board) when zooming is not performed.
E	6	1	1	1	The abnormalities in initialization of the focus lens and the abnormalities in initialization of the zoom lens occurred simultaneously.	Check both C : 32 : 60 and E : 61 : 10 of the self-diagnosis code.
E	6	2	0	0	Handshake correction function does not work well. (With PITCH angular velocity sensor output stopped.)	Inspect PITCH angular velocity sensors (SE7202 on the CM-077 board) peripheral circuits.
E	6	2	0	1	Handshake correction function does not work well. (With YAW angular velocity sensor output stopped.)	Inspect YAW angular velocity sensors (SE7201 on the CM-077 board) peripheral circuits.
E	6	2	0	2	Abnormality of IC for steadyshot.	Refer to "1-4-1. E : 62 : 02 [Abnormality of IC for Steadyshot] Occurred".
E	6	2	0	3	IC for steadyshot and micro controller communication abnormality among.	Inspect the steadyshot circuit (IC5703 on the LD-222 board).
E	6	2	1	0	Shift lens initializing failure.	Refer to "1-4-2. E : 62 : 10 [Shift Lens Initializing Failure] Occurred".
E	6	2	1	1	Shift lens overheating (Pitch).	Refer to "1-4-3. E : 62 : 11 [Shift Lens Overheating (Pitch)] Occurred".
E	6	2	1	2	Shift lens overheating (Yaw).	Refer to "1-4-4. E : 62 : 12 [Shift Lens Overheating (Yaw)] Occurred".
E	6	2	2	0	Abnormality of thermistor.	Refer to "1-4-5. E : 62 : 20 [Abnormality of Thermistor] Occurred".
E	9	1	0	1	Abnormality when flash is being charged.	Checking of flash unit or replacement of flash unit. (Note 1)
E	9	4	0	0	Fault of writing to or erasing the flashmemory	Inspect the flash memory (IC2201 on the VC-493 board). (Note 2)

Note 1: After repair, be sure to perform "1-5. PROCESS AFTER FIXING FLASH ERROR".
Note 2: Refer to Service Manual, ADJ ("1-3. DESTINATION DATA WRITE").

1-4. METHOD OF COPING WITH SHIFT LENS ERROR

LD-222 BOARD (SIDE A)

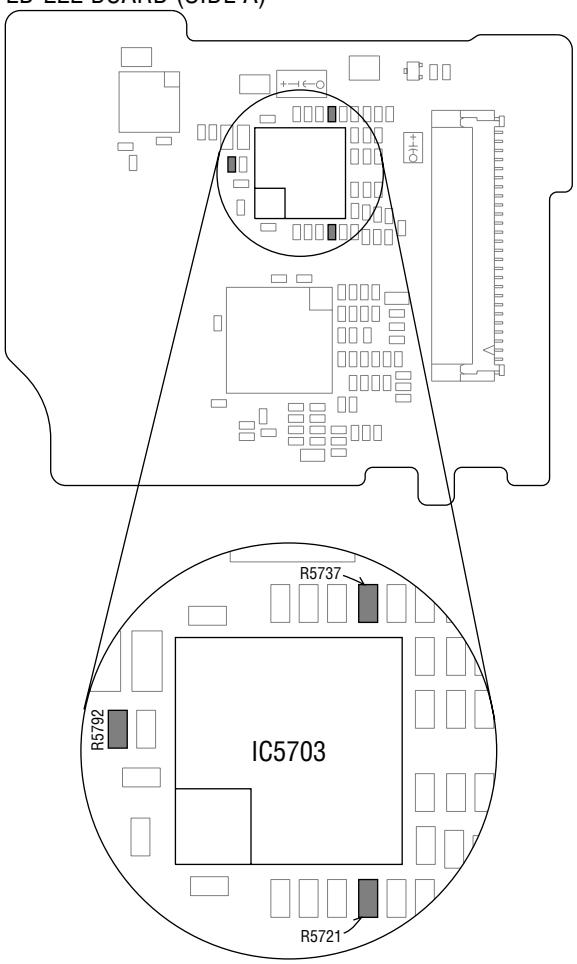
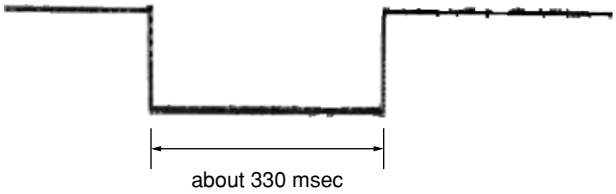


Fig. 1
Measurement points on the LD-222 board



Note: The length of low section will vary a little depending on the conditions.

Fig. 2
Change in output voltage of R5792 on the LD-222 board

VC-493 BOARD (SIDE A)

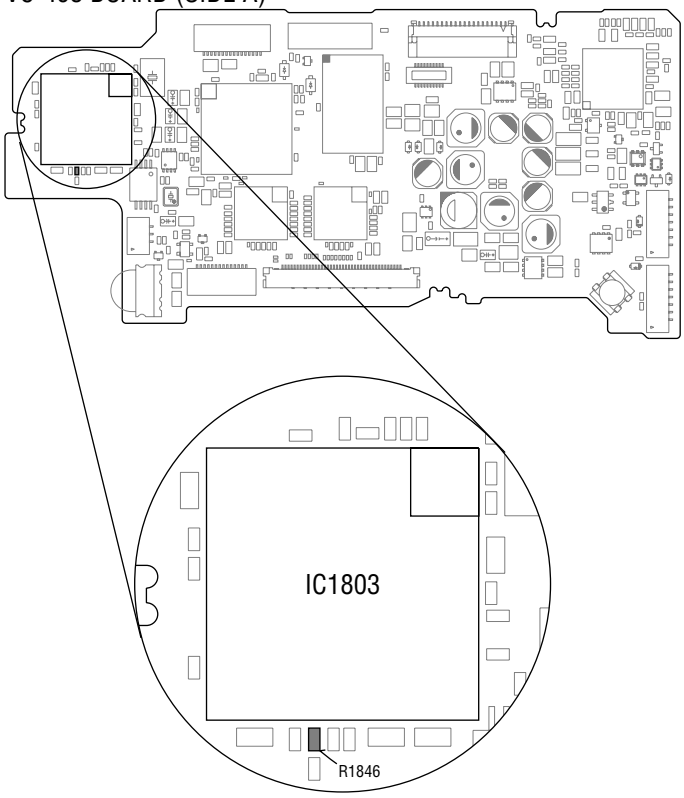


Fig. 3
Measurement points on the VC-493 board

1-4-1. E : 62 : 02 [Abnormality of IC for Steadyshot] Occurred

Order	Procedure
1	Turn the power OFF.
2	While measuring with an oscilloscope the output voltage of R5792 in the periphery of IC5703 on the LD-222 board, turn the power ON to check that the output voltage immediately after the power on change as shown in Fig. 2.
3	If the output voltage change as shown in Fig. 2, replace the lens block (Note). If it does not change as shown in Fig. 2, inspect the camera control circuit (IC1803 of VC-493 board) periphery.

Note: When the lens block was replaced, execute a necessary adjustment items referring to Service Manual, ADJ.
After the adjustment, make sure with the STEADYSHOT turned ON that the steadyshot functions appropriately in the handheld operation.

1-4-2. E : 62 : 10 [Shift Lens Initializing Failure] Occurred

Inspection method:

1) Perform the "Check 1" of "Shift Lens Check" (Note 1).
   Note 1: For "Shift Lens Check", refer to Service Manual, ADJ ("7. Shift Lens Check" of "3-2. SERVICE MODE").
2) If "EEPROM Error" is displayed while executing the "Check 1", inspect the EEPROM (IC1804 of VC-493 board).
3) Turn the power OFF and ON again.
4) Check that no error occurs. If an error occurs, replace the lens block (Note 2).
   Note 2: When the lens block was replaced, execute the necessary adjustment items referring to Service Manual, ADJ.
   After the adjustment, make sure with the STEADYSHOT turned ON that the steadyshot functions appropriately in the handheld operation.

1-4-3. E : 62 : 11 [Shift Lens Overheating (Pitch)] Occurred

Inspection method:

1) Perform the "Check 2" of "Shift Lens Check" (Note 1).
   Note 1: For "Shift Lens Check", refer to Service Manual, ADJ ("7. Shift Lens Check" of "3-2. SERVICE MODE").
2) Check if the shift lens moves while executing the "Check 2". If the shift lens does not move, replace the lens block (Note 2). When the shift lens moved, proceed to the order 3.
3) While executing the "Check 2", measure with an oscilloscope the output voltage of R5721 in the periphery of IC5703 on the LD-222 board to check the output voltage varies.
4) If the output voltage does not vary, replace the lens block (Note 2). When the output voltage varied, proceed to the order 5.
5) Turn the power OFF.
6) While measuring with an oscilloscope the output voltage of R5792 in the periphery of IC5703 on the LD-222 board, turn the power ON to check that the output voltage immediately after the power on change as shown in Fig. 2.
7) If the output voltage changes as shown in Fig. 2, replace the lens block (Note 2). If it does not change as shown in Fig. 2, inspect the camera control circuit (IC1803 of VC-493 board) periphery.
   Note 2: When the lens block was replaced, execute the necessary adjustment items referring to Service Manual, ADJ.
   After the adjustment, make sure with the STEADYSHOT turned ON that the steadyshot functions appropriately in the handheld operation.

1-4-4. E : 62 : 12 [Shift Lens Overheating (Yaw)] Occurred

Inspection method:

1) Perform the "Check 3" of "Shift Lens Check" (Note 1).
   Note 1: For "Shift Lens Check", refer to Service Manual, ADJ ("7. Shift Lens Check" of "3-2. SERVICE MODE").
2) Check if the shift lens moves while executing the "Check 3". If the shift lens does not move, replace the lens block (Note 2). When the shift lens moved, proceed to the order 3.
3) While executing the "Check 3", measure with an oscilloscope the output voltage of R5737 in the periphery of IC5703 on the LD-222 board to check the output voltage varies.
4) If the output voltage does not vary, replace the lens block (Note 2). When the output voltage varied, proceed to the order 5.
5) Turn the power OFF.
6) While measuring with an oscilloscope the output voltage of R5792 in the periphery of IC5703 on the LD-222 board, turn the power ON to check that the output voltage immediately after the power on change as shown in Fig. 2.
7) If the output voltage changes as shown in Fig. 2, replace the lens block (Note 2). If it does not change as shown in Fig. 2, inspect the camera control circuit (IC1803 of VC-493 board) periphery.
   Note 2: When the lens block was replaced, execute the necessary adjustment items referring to Service Manual, ADJ.
   After the adjustment, make sure with the STEADYSHOT turned ON that the steadyshot functions appropriately in the handheld operation.

1-4-5. E : 62 : 20 [Abnormality of Thermistor] Occurred

Order	Procedure
1	Turn the power ON.
2	Check that R1846 in the periphery of IC1803 on the VC-493 board is 0 Ω and energizes. If it is not energizes, replace the R1846. When R1846 is 0 Ω and energizes, replace the lens block (Note).
3	Check that no error occurs, after replacing the lens block and performing the necessary adjustment. If an error occurs, inspect the camera control circuit (IC1803 of VC-493 board) periphery.

Note: When the lens block was replaced, execute the necessary adjustment items referring to Service Manual, ADJ.
After the adjustment, make sure with the STEADYSHOT turned ON that the steadyshot functions appropriately in the handheld operation.

1-5. PROCESS AFTER FIXING FLASH ERROR

When “FLASH error” (Self-diagnosis Code E : 91 : 01) occurs, to prevent any abnormal situation caused by high voltage, setting of the flash is changed automatically to disabling charge and flash setting.
After fixing, this setting needs to be deactivated. Flash error code can be initialized by execution of “Clear All record-data”.
Note: For “Clear All record-data”, refer to Service Manual, ADJ (“6. Record Data” of “3-2. SERVICE MODE”).

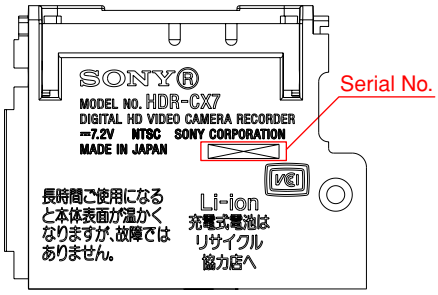
1-6. PRECAUTION ON REPLACING THE HOLDER (MS)

1-6-1. Precaution on ordering the Holder (MS)

The model display adopts the laser printing method.
Therefore, the holder (MS) for replacement differs depending on the destination.
As similar displays are provided, choose the suitable one for order.

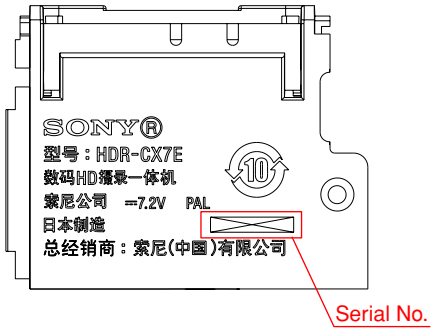
Note: After replacing the holder (MS), the serial number for it will be changed to the one exclusive for service use.
Inform a customer of the serial number change and change the serial number in the repair data.

HDR-CX7 (J)



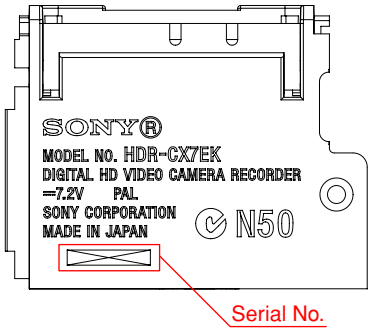
Part No.	Description
A-1334-454-A	HOLDER (CX7-J1), SERVICE (MS)

HDR-CX7E (CH)



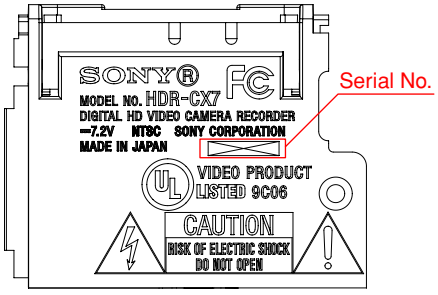
Part No.	Description
A-1334-457-A	(CX7E-CN2), SERVICE (MS)

HDR-CX7EK (E, HK, AUS, JE)



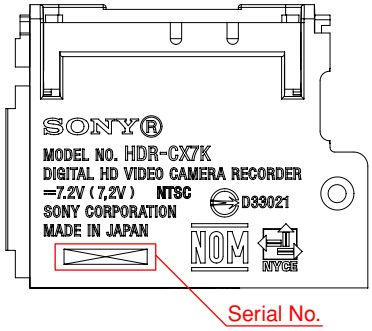
Part No.	Description
A-1334-460-A	HOLDER (CX7KE-E34), (MS)

HDR-CX7 (US)



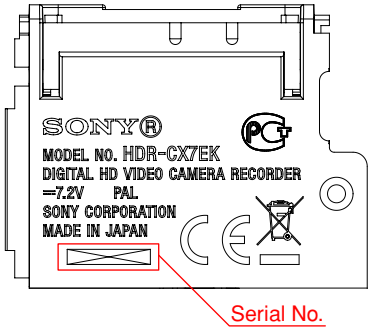
Part No.	Description
A-1334-455-A	HOLDER (CX7-U2), SERVICE (MS)

HDR-CX7K (E, JE)



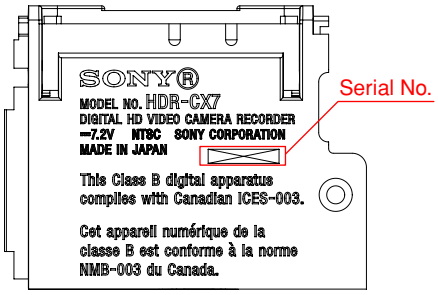
Part No.	Description
A-1334-458-A	(CX7K-E23), SERVICE (MS)

HDR-CX7EK (AEP)



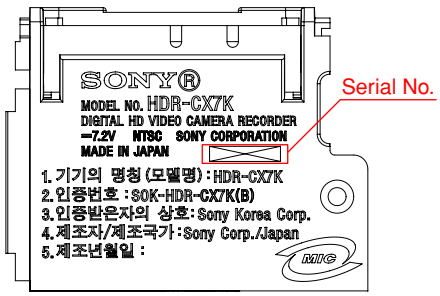
Part No.	Description
A-1334-461-A	HOLDER (CX7KE-CEN), (MS)

HDR-CX7 (CND)


SONY
MODEL NO. HDR-CX7
DIGITAL HD VIDEO CAMERA RECORDER
MADE IN JAPAN
This Class B digital apparatus compiles with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.
Serial No.

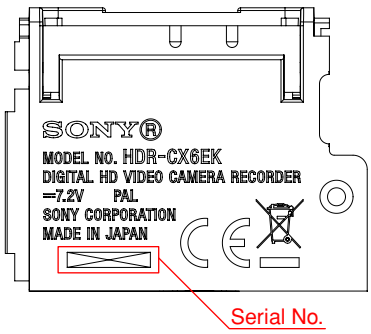
Part No.	Description
A-1334-456-A	HOLDER (CX7-CA2), SERVICE (MS)

HDR-CX7K (KR)



Part No.	Description
A-1334-459-A	HOLDER (CX7K-KR2), SERVICE (MS)

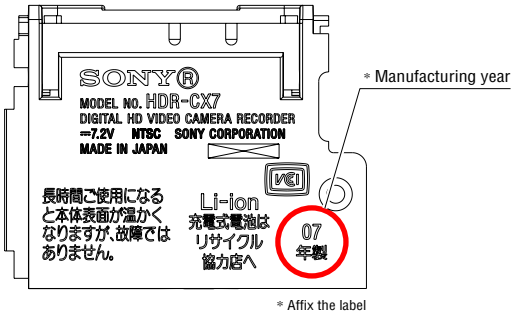
HDR-CX6EK (AEP, UK)



Part No.	Description
A-1334-462-A	HOLDER (CX6EK-CEH), (MS)

1-6-2. Precaution on Replacing the Holder (MS) for J Models

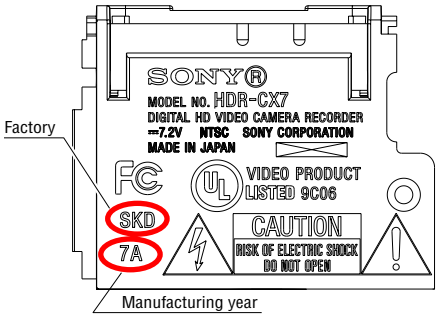
The year of manufacture on the labels should be the same as the previous Holder (MS) (circled portions shown on the below).
Example: For the figure below, attach the “Made of 07 years” label.
* The replacement label and “inset (how to affix)” are supplied together with holder (MS) for service.



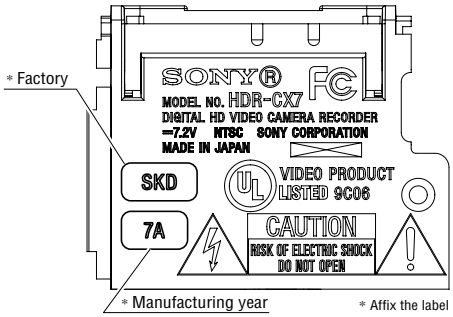
1-6-3. Precaution on Replacing the Holder (MS) for US Models

The date of manufacture and the manufacturer on the labels should be the same as the previous Holder (MS) (circled portions shown on the below).
Example: For the figure below, attach the “7A” and “SKD” labels.
* The replacement labels and “inset (how to affix)” are supplied together with holder (MS) for service.
* The layout of the print has changed so that a new holder (MS) for US may widen the area that sticks labels on.

Previous Holder (MS)

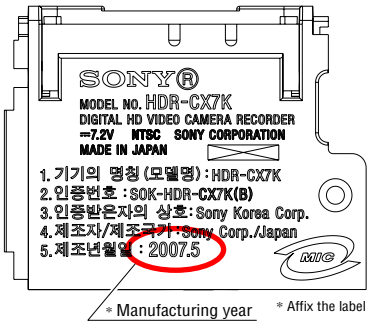


New Holder (MS)



1-6-4. Precaution on Replacing the Holder (MS) for KR Models

The date of manufacture on the labels should be the same as the previous Holder (MS) (circled portions shown on the below).
Example: For the figure below, attach the “2007.5” label.
* The replacement label and “inset (how to affix)” are supplied together with holder (MS) for service.


SONY
MODEL NO. HDR-CX7K
DIGITAL HD VIDEO CAMERA RECORDER
=7.2V NTSC SONY CORPORATION
MADE IN JAPAN
1. 기기의 명칭 (모델명) : HDR-CX7K
2. 인증번호 : SOK-HDR-CX7K(B)
3. 인증받은자의 상호 : Sony Korea Corp.
4. 제조자/제조국가 : Sony Corp./Japan
5. 제조년월일 : 2007.5
* Manufacturing year
* Affix the label

1. SERVICE NOTE

ENGLISH JAPANESE

1-1. 修理時の電源供給について

本機では，安定化電源（8.4Vdc）からバッテリ端子に電源を供給した場合，約10秒後にシャットオフし，動作しなくなります。
これを避けるため，下記の方法を用いてください。

方法：
DC入力端子を使用する。（ACアダプタ（AC-L200/L200B）を使用する。）

1-2. VC-493基板交換時の注意

仕向けデータ

補修用基板と交換する時，補修用基板に書かれている仕向けデータは元の設定と違っている場合があります。
ADJ編を参照して，「DESTINATION DATA WRITE」を行ってください。

USBシリアルNo.

セットは，1台毎に異なる固有のID（USB Serial No.）を書き込んだ後，出荷されています。
新品の補修用基板には，このIDが書き込まれていないので，基板交換後にIDを入力する必要があります。
ADJ編を参照して，「USB SERIAL No. INPUT」を行ってください。

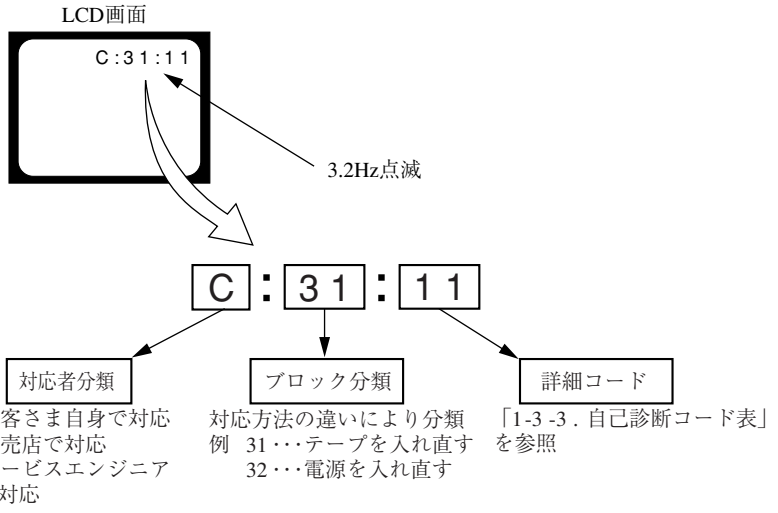
1-3. 自己診断機能

1-3-1. 自己診断機能について

本機の動作に不具合が生じたとき，自己診断機能が働き，LCD画面に，どう処置したらよいか判断できる表示を行います。自己診断機能については取扱説明書にも掲載されています。

1-3-2. 自己診断表示

本機の動作に不具合が生じたとき，ＬＣＤ画面のカウンタ表示部分がアルファベットと数字の4桁表示になり，3.2Hzで点滅します。この5 文字の表示によって対応者分類および不具合の生じたブロックの分類，不具合の詳細コードを示します。



1-3-3. 自己診断コード表

自己診断コード			症状／状態	対応／方法
対応者	ブロック機能	詳細コード		
C	0 4	0 0	標準以外のバッテリを使用している	インフォリチウムバッテリを使用する。
C	1 3	0 1	フォーマットしていない“メモリーステック デュオ”を入れた“メモリーステック デュオ”が壊れている	“メモリーステック デュオ”をフォーマットする。 新しい“メモリーステック デュオ”に交換する。
C	1 3	0 2	アクセスエラー	電源を外し，再度入れ直してから操作する。
C	3 2	6 0	フォーカスが合いにくい（フォーカスの初期化ができない）	操作スイッチの電源を入れ直す。 復帰しない場合，レンズブロックのフォーカスMRセンサ（LD-222基板CN5302 ⑯，⑱ピン）を点検する。異常なければフォーカスモータ駆動回路（LD-222基板IC5404）を点検する。
E	2 0	0 0	EEPROMが書き換えられている	EEPROMのデータを元の値に戻す
E	6 1	1 0	ズーム動作の異常（ズームレンズの初期化ができない）	ズームレバーを操作したときにズーム動作をすれば，レンズブロックのズームMRセンサ（LD-222基板CN5302 ⑳，㉑ピン）を点検する。ズーム動作をしなければズームモータ駆動回路（LD-222基板IC5404）を点検する。
E	6 1	1 1	フォーカス，ズーム異常	自己診断コードC：32：60とE：61：10の両方を点検する。
E	6 2	0 0	手振れ補正が効きにくい（PITCH角速度センサ出力張り付き）	PITCH角速度センサ（CM-077基板SE7202）周辺回路を点検する。
E	6 2	0 1	手振れ補正が効きにくい（YAW角速度センサ出力張り付き）	YAW角速度センサ（CM-077基板SE7201）周辺回路を点検する。
E	6 2	0 2	手振れ補正用ICの異常	「1-4-1. E：62：02（手振れ補正用ICの異常）が出た場合」を参照。
E	6 2	0 3	手振れ補正用ICとマイクロコントローラーとの通信異常	手振れ補正回路（LD-222基板IC5703）を点検。
E	6 2	1 0	シフトレンズ初期化異常	「1-4-2. E：62：10（シフトレンズ初期化異常）が出た場合」を参照。
E	6 2	1 1	シフトレンズオーバーヒート（PITCH）	「1-4-3. E：62：11（シフトレンズオーバーヒート（PITCH））が出た場合」を参照。
E	6 2	1 2	シフトレンズオーバーヒート（YAW）	「1-4-4. E：62：12（シフトレンズオーバーヒート（YAW））が出た場合」を参照。
E	6 2	2 0	サーミスタの異常	「1-4-5. E：62：20（サーミスタの異常）が出た場合」を参照。
E	9 1	0 1	フラッシュの充電異常	フラッシュユニットの点検または交換をする。（注1）
E	9 4	0 0	フラッシュメモリの書込み/消去動作不良	フラッシュメモリ（VC-493基板IC2201）を点検する。（注2）

注1： 修理後は，必ず「1-5. フラッシュ異常修理後の処置」を行ってください。
注2： ADJ編（「1-3. DESTINATION DATA WRITE」）を参照してください。

1-4. シフトレンズエラーの対処方法

LD-222基板（A面側）

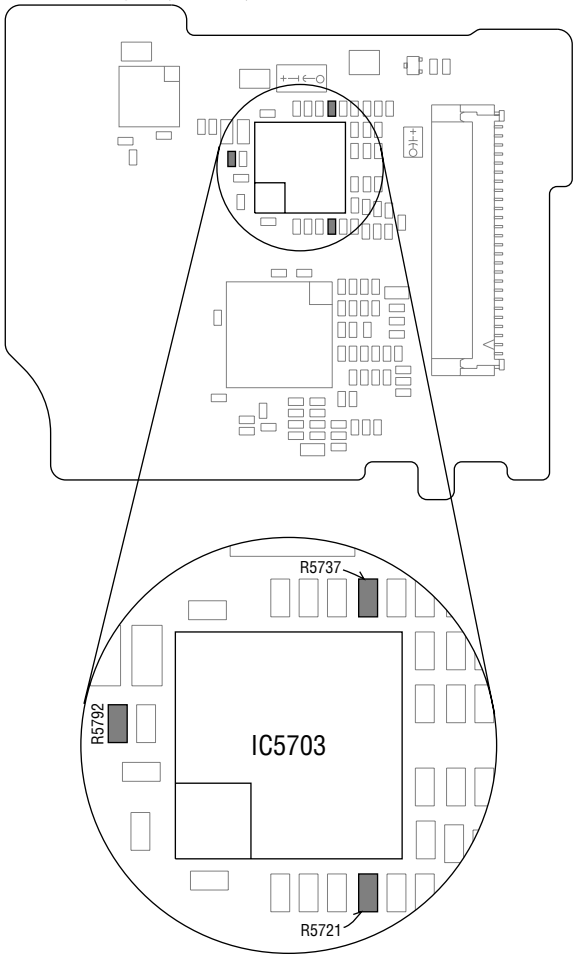
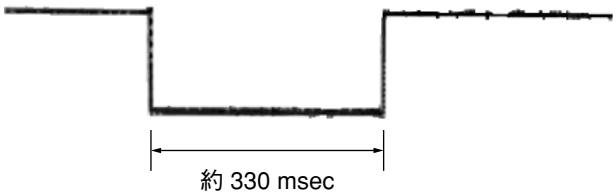


図1. LD-222基板測定箇所



注意：Lowの区間の長さは場合によって多少異なる

図2. LD-222基板R5792の出力電圧の変化

VC-493基板（A面側）

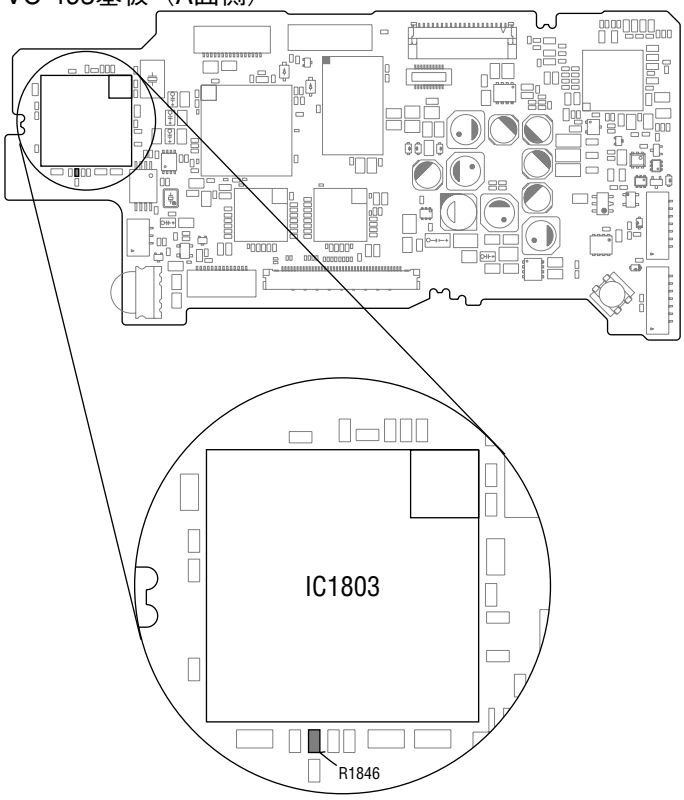


図3. VC-493基板測定箇所

1-4-1. E：62：02（手振れ補正用ICの異常）が出た場合

順序	作業内容
1	電源を切る。
2	LD-222基板IC5703の周辺にあるR5792の出力電圧をオシロスコープで測定しながら電源を入れる。電源投入直後の出力電圧が図2の様に変化することを確認する。
3	出力電圧が図2の様に変化するときはレンズブロックを交換する（注）。図2の様に変化しないときはカメラコントロール回路（VC-493基板IC1803）周辺を点検する。

注：レンズブロックを交換した場合は，ADJ編を参照して必要な調整項目を実施すること。調整後は手振れ補正ONの状態にして，手持ち動作で手振れ補正が適切に動作していることを確認する。

1-4-2. E：62：10（シフトレンズ初期化異常）が出た場合

点検方法：

1） シフトレンズチェックの「Check 1」を実行する（注1）。
注1：シフトレンズチェックについては，ADJ編（「3-2. サービスモード」の「7. シフトレンズチェック」）を参照してください。
2） 「Check 1」を実行している間に「EEPROM Error」のメッセージが表示された場合は，EEPROM（VC-493基板IC1804）を点検する。
3） 電源を切り，再び電源を入れる。
4） エラーが発生しないことを確認する。もしエラーが発生する場合はレンズブロックを交換する（注2）。
注2：レンズブロックを交換した場合は，ADJ編を参照して必要な調整項目を実施すること。調整後は手振れ補正ONの状態にして，手持ち動作で手振れ補正が適切に動作していることを確認する。

1-4-3. E：62：11（シフトレンズオーバーヒート（PITCH））が出た場合

点検方法：

1） シフトレンズチェックの「Check 2」を実行する（注1）。
注1：シフトレンズチェックについては，ADJ編（「3-2. サービスモード」の「7. シフトレンズチェック」）を参照してください。
2） 「Check 2」を実行している間にシフトレンズが動いたか確認する。もしシフトレンズが動かない場合はレンズブロックを交換する（注2）。動く場合は順序3に進む。
3） LD-222基板IC5703の周辺にあるR5721の出力電圧をオシロスコープで測定しながら，「Check 2」を実行したときに出力電圧が変化することを確認する。
4） 出力電圧が変化しないときはレンズブロックを交換する（注2）。変化するときは順序5に進む。
5） 電源を切る。
6） LD-222基板IC5703の周辺にあるR5792の出力電圧をオシロスコープで測定しながら電源を入れる。電源投入直後の出力電圧が図2の様に変化することを確認する。
7） 出力電圧が図2の様に変化するときはレンズブロックを交換する（注2）。図2の様に変化しないときはカメラコントロール回路（VC-493基板IC1803）周辺を点検する。
注2：レンズブロックを交換した場合は，ADJ編を参照して必要な調整項目を実施すること。調整後は手振れ補正ONの状態にして，手持ち動作で手振れ補正が適切に動作していることを確認する。

1-4-4. E：62：12（シフトレンズオーバーヒート（YAW））が出た場合

点検方法：

1） シフトレンズチェックの「Check 3」を実行する（注1）。
注1：シフトレンズチェックについては，ADJ編（「3-2. サービスモード」の「7. シフトレンズチェック」）を参照してください。
2） 「Check 3」を実行している間にシフトレンズが動いたか確認する。もしシフトレンズが動かない場合はレンズブロックを交換する（注2）。動く場合は順序3に進む。
3） LD-222基板IC5703の周辺にあるR5737の出力電圧をオシロスコープで測定しながら，「Check 3」を実行したときに出力電圧が変化することを確認する。
4） 出力電圧が変化しないときはレンズブロックを交換する（注2）。変化するときは順序5に進む。
5） 電源を切る。
6） LD-222基板IC5703の周辺にあるR5792の出力電圧をオシロスコープで測定しながら電源を入れる。電源投入直後の出力電圧が図2の様に変化することを確認する。
7） 出力電圧が図2の様に変化するときはレンズブロックを交換する（注2）。図2の様に変化しないときはカメラコントロール回路（VC-493基板IC1803）周辺を点検する。
注2：レンズブロックを交換した場合は，ADJ編を参照して必要な調整項目を実施すること。調整後は手振れ補正ONの状態にして，手持ち動作で手振れ補正が適切に動作していることを確認する。

1-4-5. E：62：20(サーミスタの異常)が出た場合

順序	作業内容
1	電源を入れる。
2	VC-493基板IC1803の周辺にあるR1846が0 Ωであり，かつ通電していることを確認する。通電していない場合はR1846を交換する。R1846が0 Ωであり，かつ通電している場合はレンズブロックを交換する(注)。
3	レンズブロックを交換し必要な調整を行った後，エラーが発生しないことを確認する。もしエラーが発生する場合はカメラコントロール回路(VC-493基板IC1803)周辺を点検する。

注：レンズブロックを交換した場合は，ADJ編を参照して必要な調整項目を実施すること。調整後は手振れ補正ONの状態にして，手持ち動作で手振れ補正が適切に動作していることを確認する。

1-5. フラッシュ異常修理後の処置

本機はフラッシュエラー（自己診断コードE:91:01）が発生した場合，高電圧による異常を防止するために自動的にフラッシュ充電および発光禁止の設定になります。
フラッシュエラー発生後はエラーの解除を行う必要があります。エラーは，「全履歴データの初期化」を実行することにより解除できます。
注：「全履歴データの初期化」については，ADJ編（「3-2. サービスモード」の「6. 履歴データ」）を参照してください。

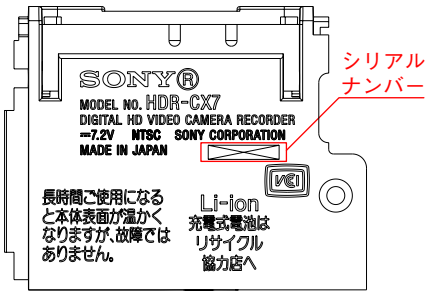
1-6. MSホルダー交換時の注意

1-6-1. MSホルダー注文時の注意

機種の表示部はレーザー印字方式を採用しております。
この為，交換用のMSホルダーは機種，仕向けにより異なります。類似の表示もありますので，該当するものを選んで注文してください。

注意：MSホルダー交換後はシリアルナンバーがサービス専用のシリアルナンバーに変更されます。お客様への案内と修理データのシリアルナンバー変更を行ってください。

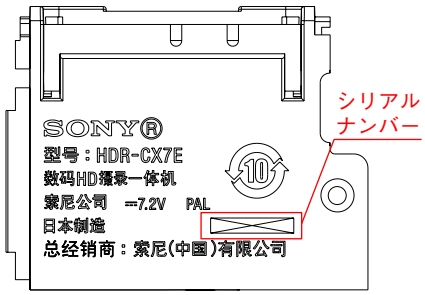
HDR-CX7 (J仕向)



部品コード　部　品　名

A-1334-454-A　ｻｰﾋﾞｽ用MSﾎﾙﾀﾞｰ (CX7-J1)

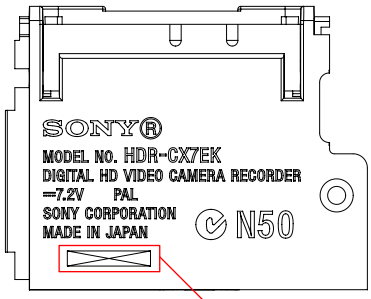
HDR-CX7E (CH仕向)



部品コード　部　品　名

A-1334-457-A　ｻｰﾋﾞｽ用MSﾎﾙﾀﾞｰ (CX7E-CN2)

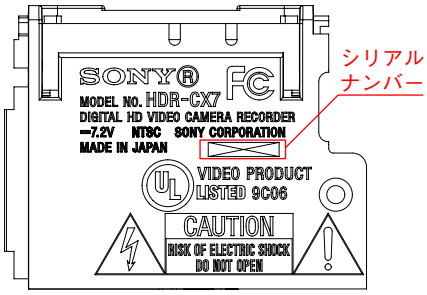
HDR-CX7EK (E, HK, AUS, JE仕向)



部品コード　部　品　名

A-1334-460-A　ｻｰﾋﾞｽ用MSﾎﾙﾀﾞｰ (CX7KE-E34)

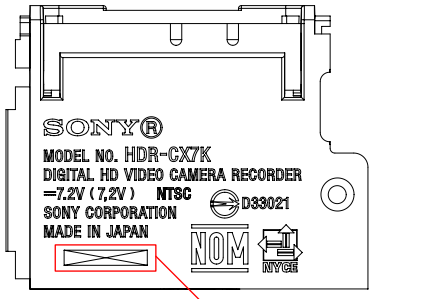
HDR-CX7 (US仕向)



部品コード　部　品　名

A-1334-455-A　ｻｰﾋﾞｽ用MSﾎﾙﾀﾞｰ (CX7-U2)

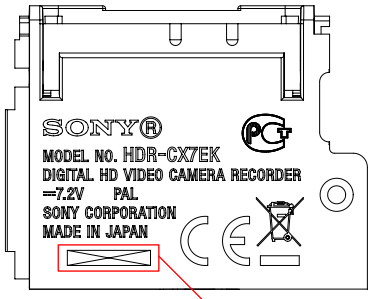
HDR-CX7K (E, JE仕向)



部品コード　部　品　名

A-1334-458-A　ｻｰﾋﾞｽ用MSﾎﾙﾀﾞｰ (CX7K-E23)

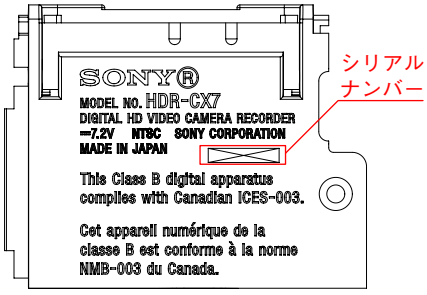
HDR-CX7EK (AEP仕向)



部品コード　部　品　名

A-1334-461-A　ｻｰﾋﾞｽ用MSﾎﾙﾀﾞｰ (CX7KE-CEN)

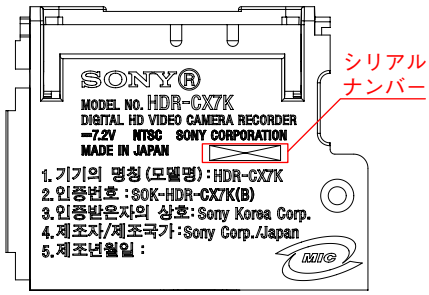
HDR-CX7 (CND仕向)


SONY
MODEL NO. HDR-CX7
DIGITAL HD VIDEO CAMERA RECORDER
7.2V NTSC SONY CORPORATION
MADE IN JAPAN
This Class B digital apparatus compiles with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.
シリアルナンバー

部品コード　部　品　名

A-1334-456-A　ｻｰﾋﾞｽ用MSﾎﾙﾀﾞｰ (CX7-CA2)

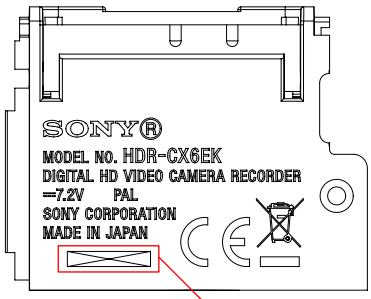
HDR-CX7K (KR仕向)



部品コード　部　品　名

A-1334-459-A　ｻｰﾋﾞｽ用MSﾎﾙﾀﾞｰ (CX7K-KR2)

HDR-CX6EK (AEP, UK仕向)

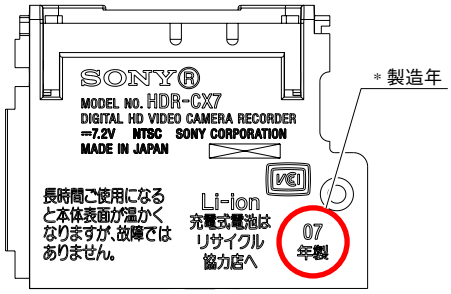


部品コード　部　品　名

A-1334-462-A　ｻｰﾋﾞｽ用MSﾎﾙﾀﾞｰ (CX6EK-CEH)

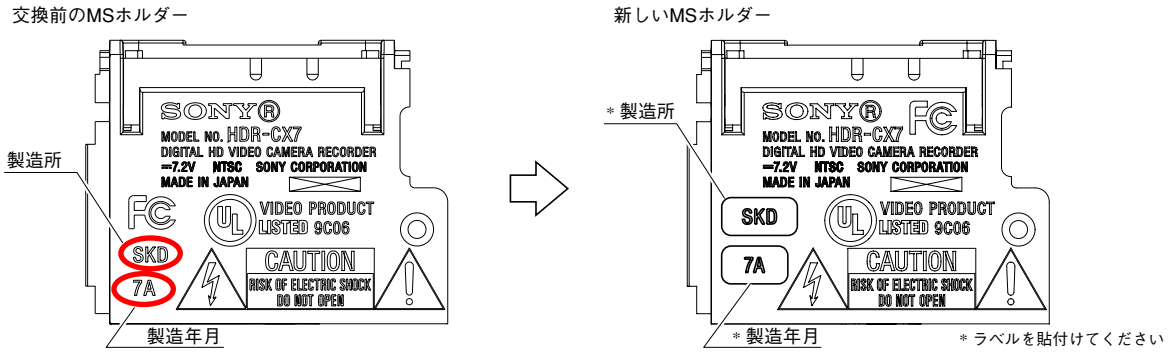
1-6-2. 日本向けモデルのMSホルダー交換時の注意

交換前のMSホルダーに印字されている“製造年（下図の○部の表示）”と同じ表示のラベルを新しいMSホルダーに貼付けてください。
例：下図では，“07年製”のラベルを貼る
* ラベルは，サービス用MSホルダーに「投げ込み（ラベル貼り方）」を含めて同梱されています。



1-6-3. US向けモデルのMSホルダー交換時の注意

交換前のMSホルダーに印字されている“製造年月および製造所（下図の○部の表示）”と同じ表示のラベルを新しいMSホルダーに貼付けてください。
例：下図では，“7A”と“SKD”のラベルを貼る
* ラベルは，サービス用MSホルダーに「投げ込み（ラベル貼り方）」を含めて同梱されています。
* US向けの新しいMSホルダーは，ラベルを貼る領域を広くするため，印字のレイアウトが変わっています。



1-6-4. 韓国向けモデルのMSホルダー交換時の注意

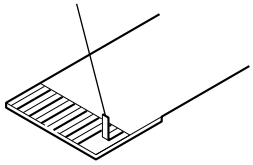
交換前のMSホルダーに印字されている“製造年月（下図の○部の表示）”と同じ表示のラベルを新しいMSホルダーに貼付けてください。
例：下図では，“2007.5”のラベルを貼る
* ラベルは，サービス用MSホルダーに「投げ込み（ラベル貼り方）」を含めて同梱されています。

2. DISASSEMBLY

NOTE FOR REPAIR

- Make sure that the flat cable and flexible board are not cracked of bent at the terminal. Do not insert the cable insufficiently nor crookedly.
- When remove a connector, don't pull at wire of connector. It is possible that a wire is snapped.
- When installing a connector, don't press down at wire of connector. It is possible that a wire is snapped.

Cut and remove the part of gilt which comes off at the point. (Be careful or some pieces of gilt may be left inside)

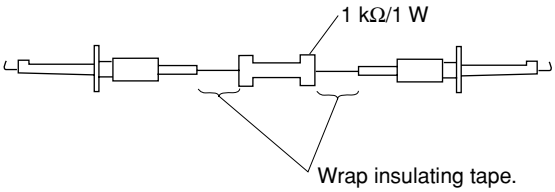


DISCHARGING OF THE ST-165 BOARD'S CHARGING CAPACITOR (C5206)

The charging capacitor (C5206) of the ST-165 board is charged up to the maximum 330 V potential.
There is a danger of electric shock by this high voltage when the capacitor is handled by hand. The electric shock is caused by the charged voltage which is kept without discharging when the main power of the unit is simply turned off. Therefore, the remaining voltage must be discharged as described below.

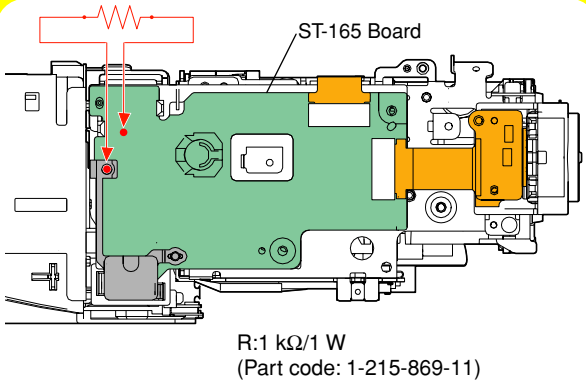
Preparing the Short Jig

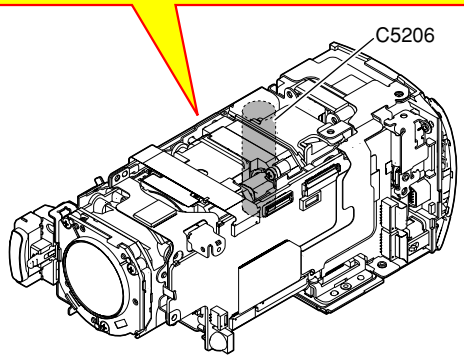
To preparing the short jig, a small clip is attached to each end of a resistor of 1 kΩ /1 W (1-215-869-11).
Wrap insulating tape fully around the leads of the resistor to prevent electrical shock.



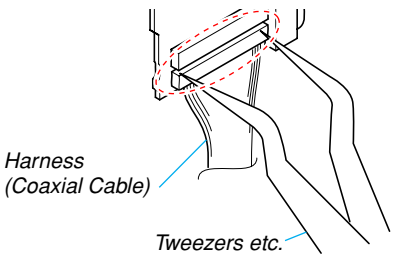
Note: High-voltage cautions

Discharging the Capacitor
Short-circuit between the two points with the short jig about 10 seconds.



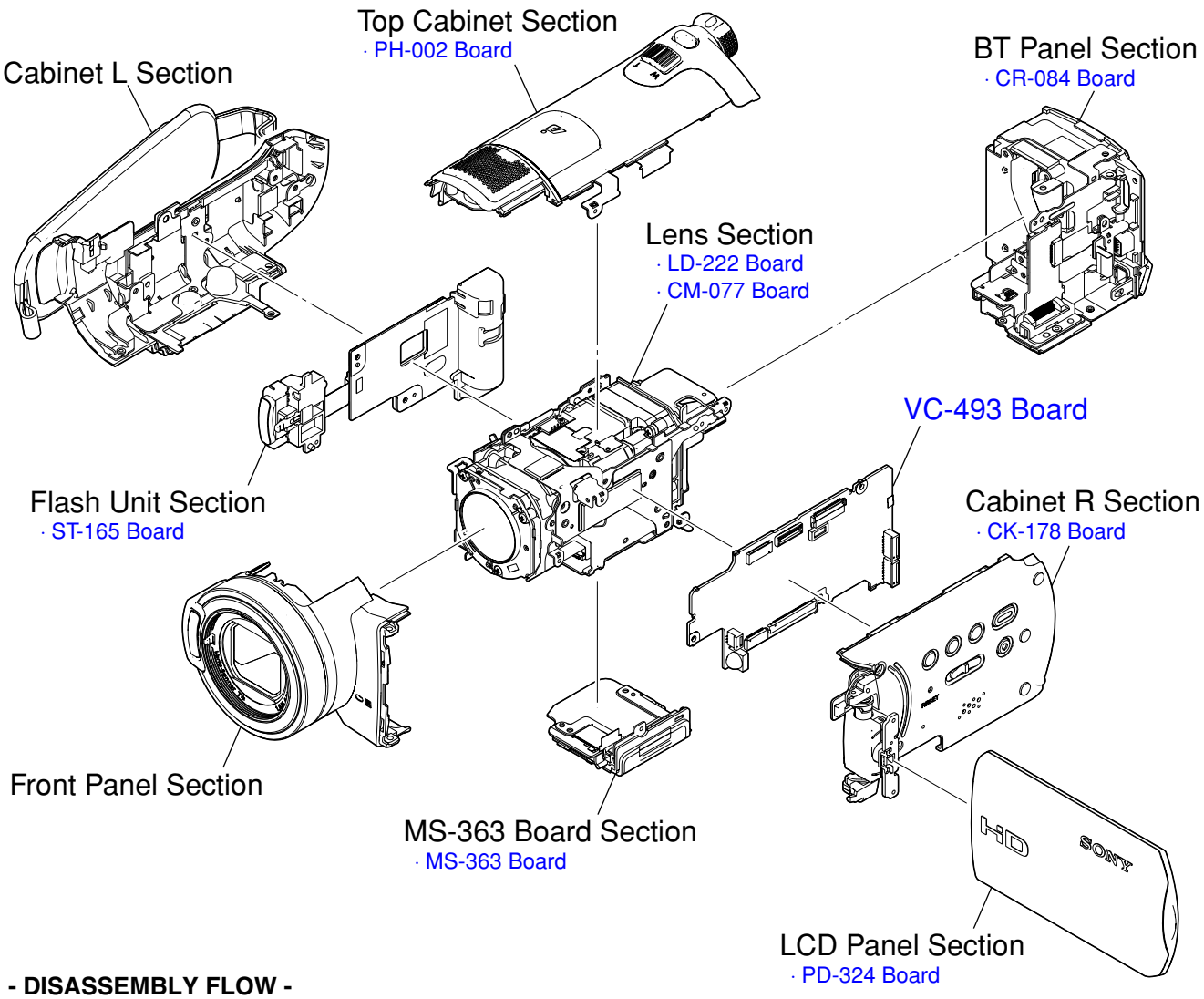


NOTE FOR DISCONNECTING THE HARNESS (COAXIAL CABLE)



When disconnecting the harness (Coaxial Cable), do not pull the harness part but pull off the connector body with tweezers etc.

2-1. IDENTIFYING PARTS



- DISASSEMBLY FLOW -

- 2-2-1. OVERALL SECTION
  - · LCD Panel Section
  - · Front Panel Section
- 2-2-4. MAIN BODY SECTION
  - · Top Cabinet Section
  - · MS-363 Board Section
  - · Cabinet L Section
- 2-2-2. LCD PANEL SECTION
  - · LCD Panel Section
  - · Cabinet R Section
- 2-2-3. CABINET R SECTION
  - · Hinge Block
  - · CK-178 Board
  - · Loud Speaker
- 2-2-5. LENS/BT SECTION
  - · Lens Section
  - · BT Panel Section
  - · VC-493 Board
  - · Flash Unit Section

2-2. DISASSEMBLY

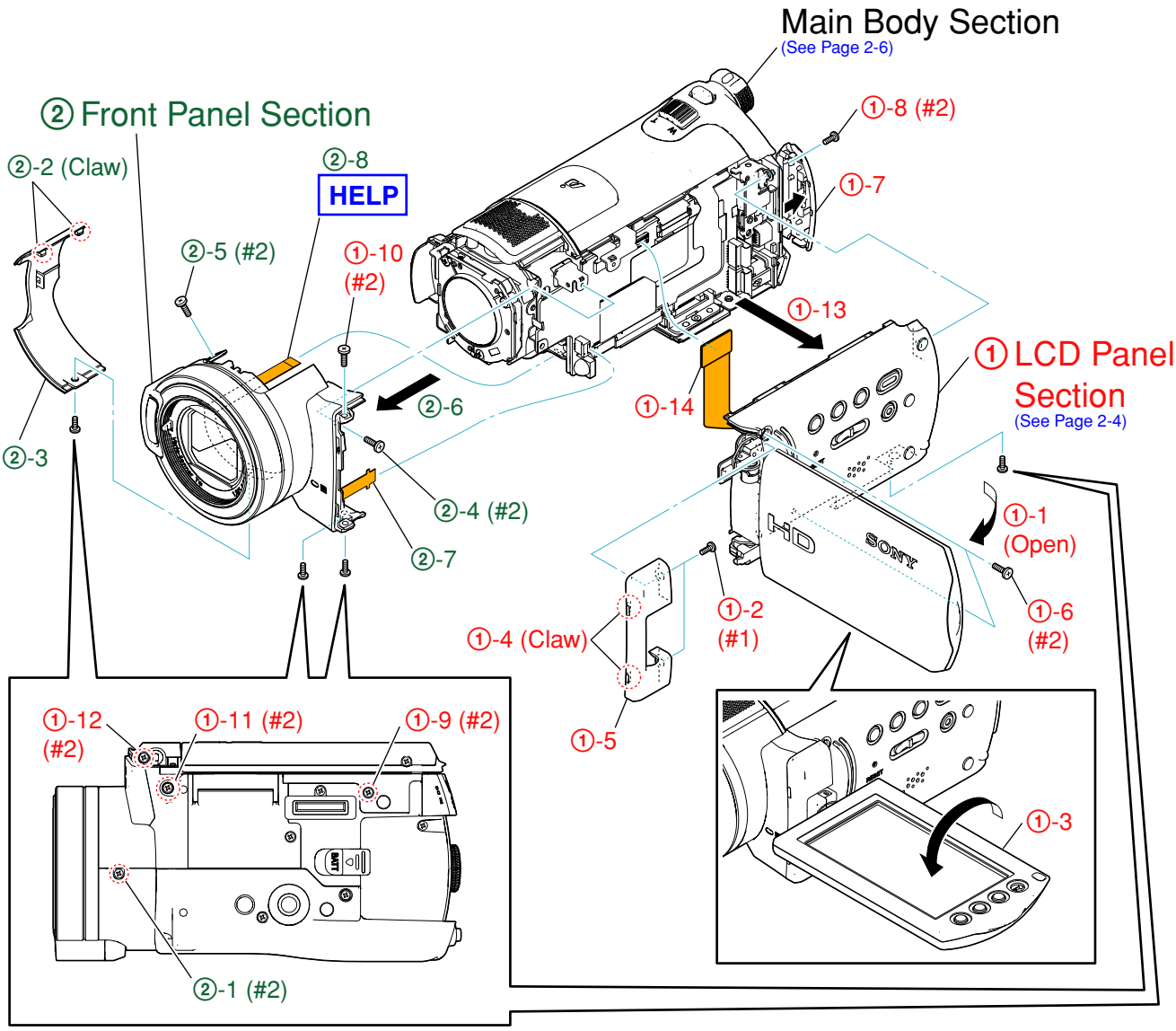
EXPLODED VIEW HARDWARE LIST

2-2-1. OVERALL SECTION

Follow the disassembly in the numerical order given.

① LCD Panel Section (①-1 to ①-14)

② Front Panel Section (②-1 to ②-8)

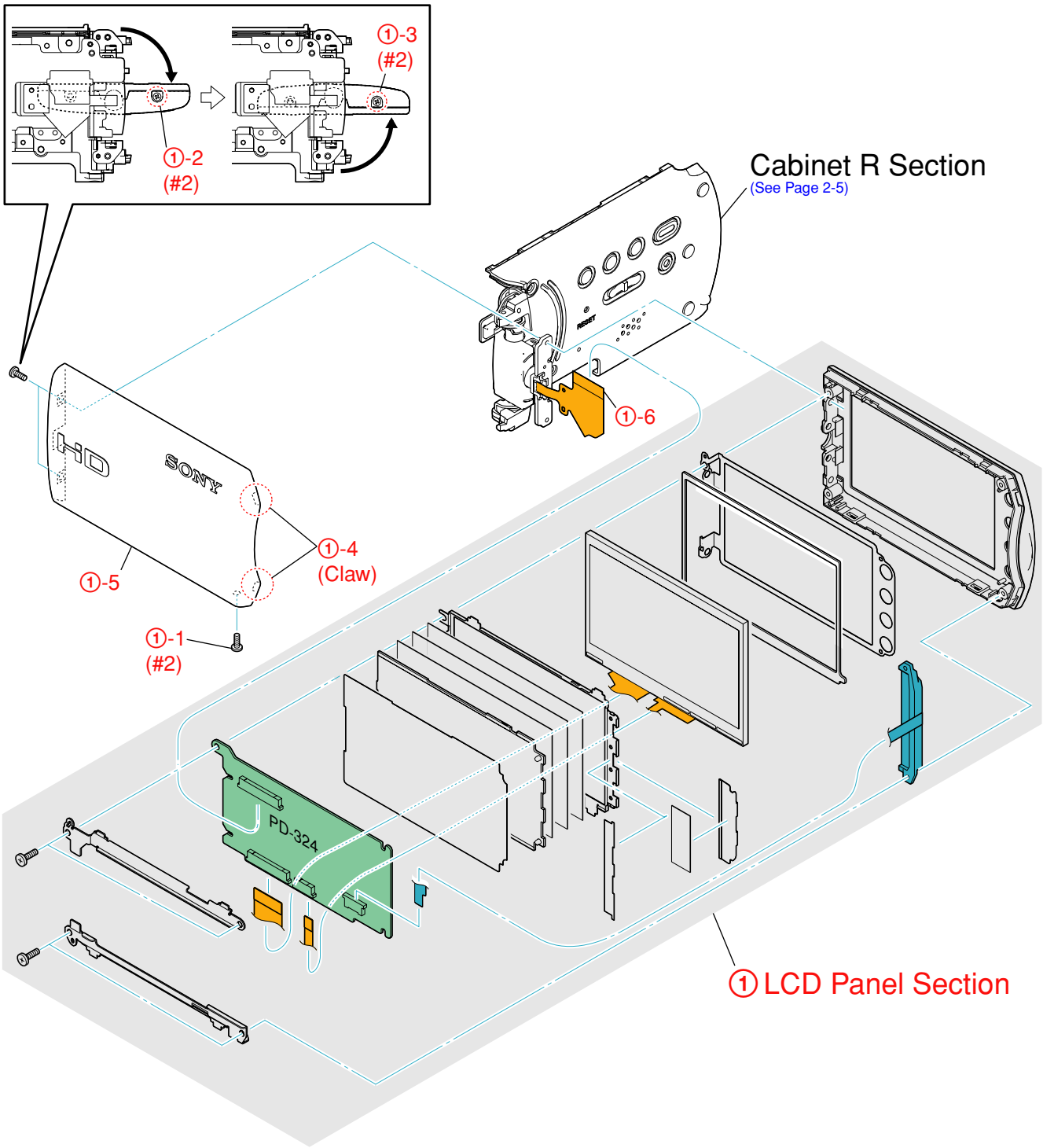


2-2-2. LCD PANEL SECTION

Follow the disassembly in the numerical order given.

① LCD Panel Section (①-1 to ①-6)

EXPLODED VIEW HARDWARE LIST

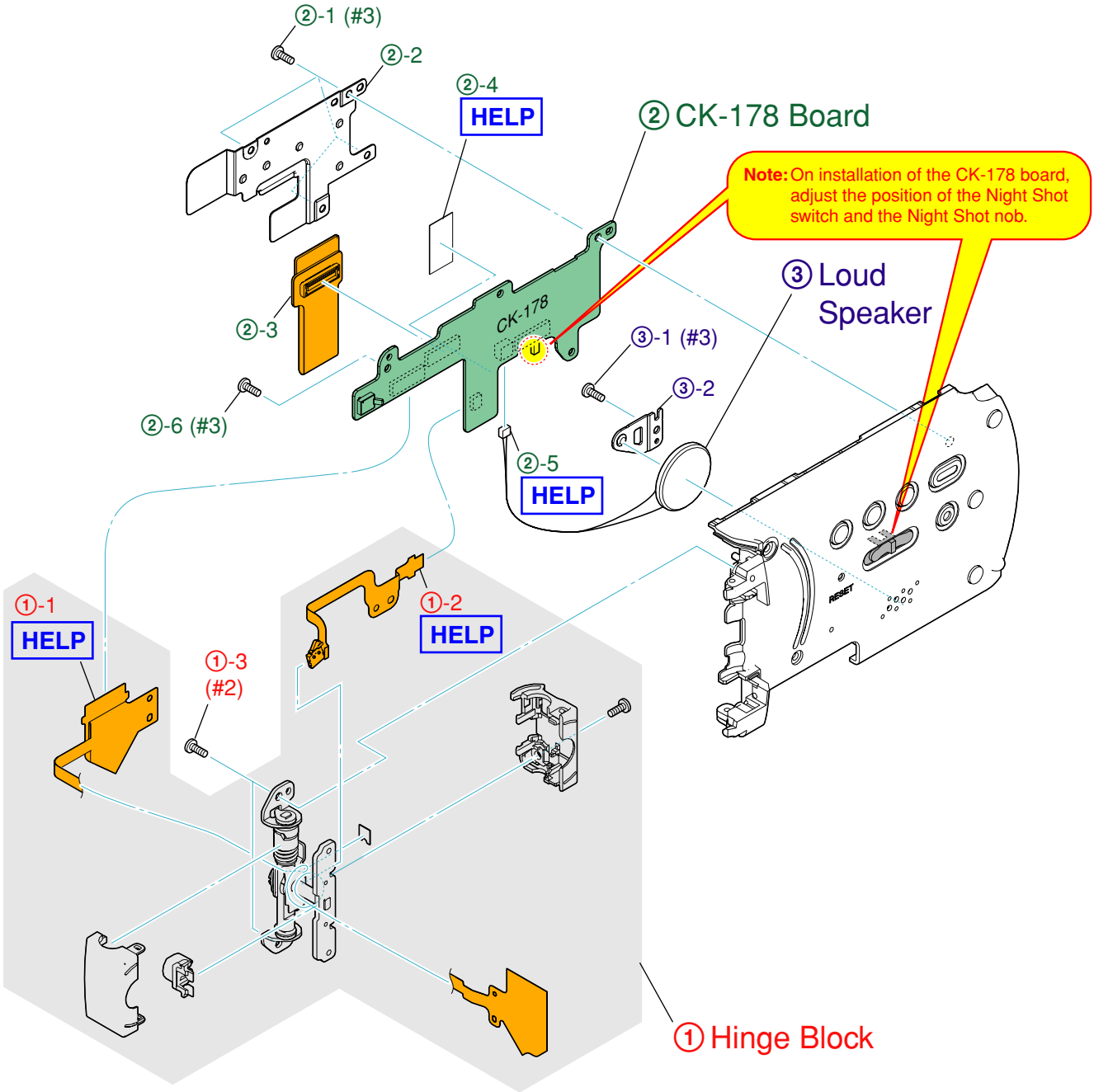


2-2-3. CABINET R SECTION

Follow the disassembly in the numerical order given.

① Hinge Block (①-1 to ①-3)
② CK-178 Board (②-1 to ②-6)
③ Loud Speaker (③-1 to ③-2)

EXPLODED VIEW HARDWARE LIST



2-2-4. MAIN BODY SECTION

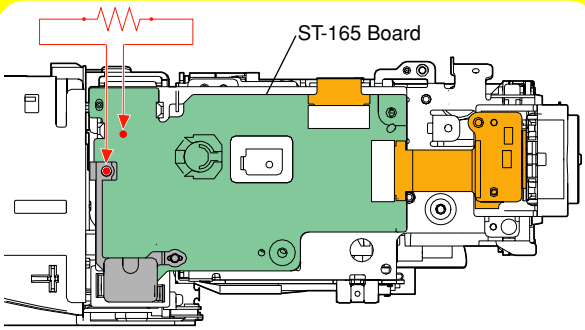
EXPLODED VIEW HARDWARE LIST

Follow the disassembly in the numerical order given.

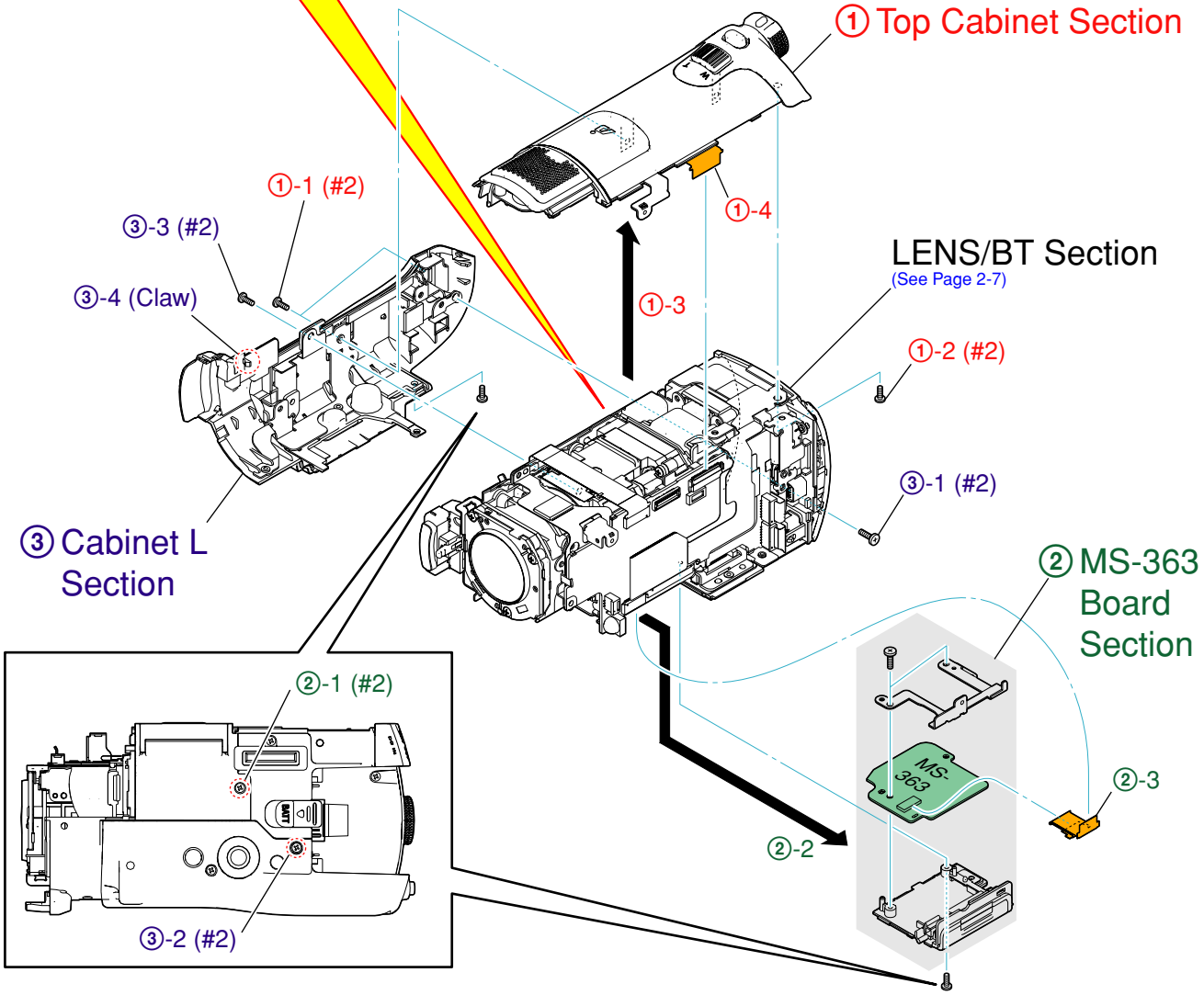
① Top Cabinet Section (①-1 to ①-4)
② MS-363 Board Section (②-1 to ②-3)
③ Cabinet L Section (③-1 to ③-4)

Note: High-voltage cautions

Discharging the Capacitor
Short-circuit between the two points with the short jig about 10 seconds.



R:1 kΩ/1 W
(Part code: 1-215-869-11)

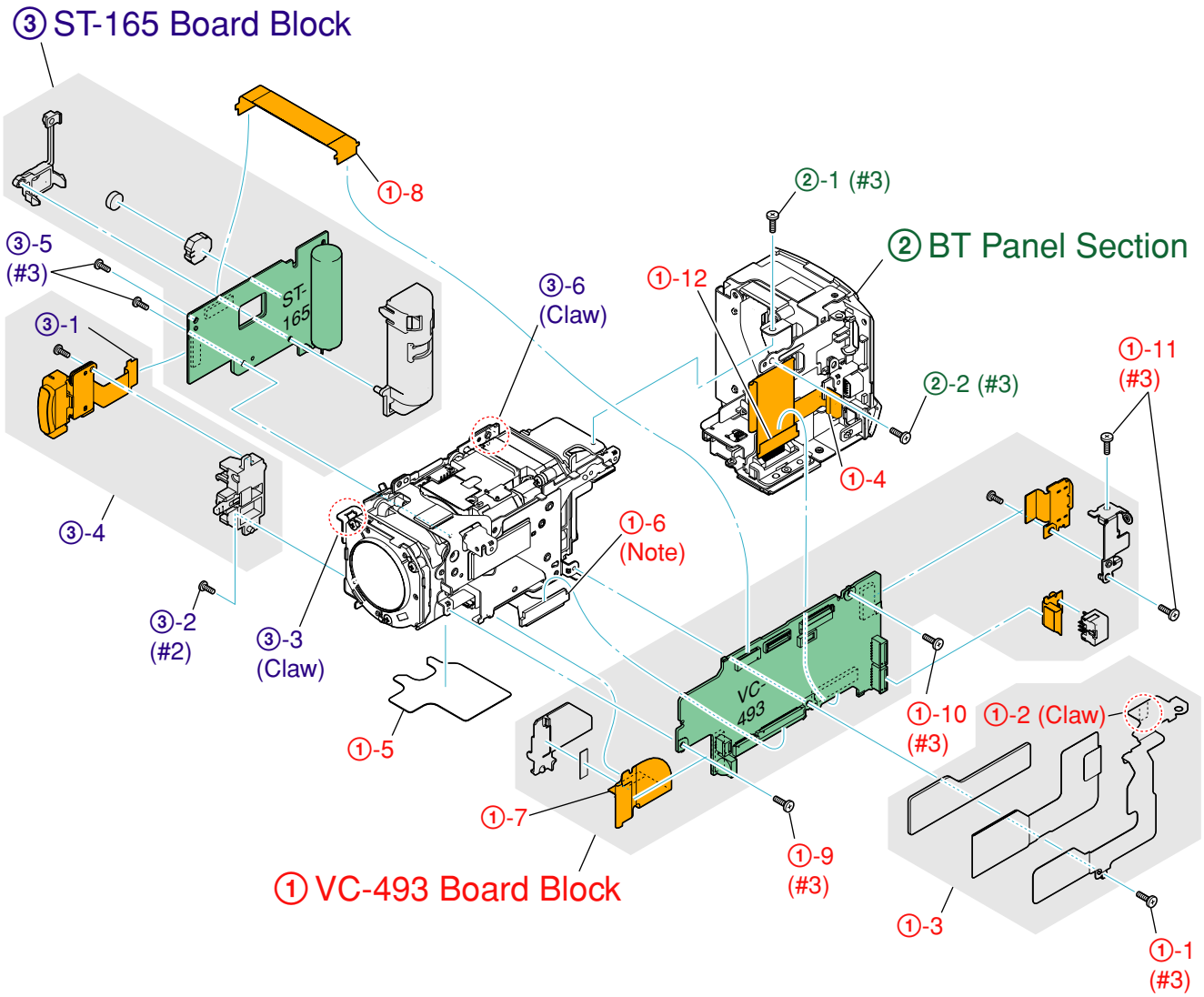


2-2-5. LENS/BT SECTION

EXPLODED VIEW HARDWARE LIST

Follow the disassembly in the numerical order given.

① VC-493 Board Block (①-1 to ①-12)
② BT Panel Section (②-1 to ②-2)
③ ST-165 Board Block (③-1 to ③-6)



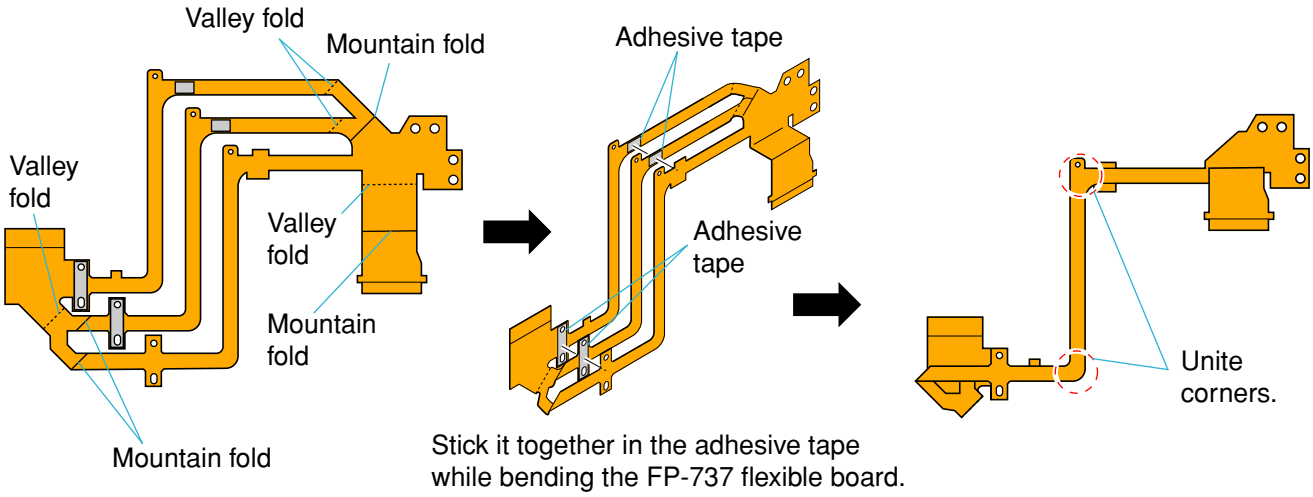
Note: Refer to page 2-1 “Note for disconnecting the harness (coaxial cable)”.

HELP

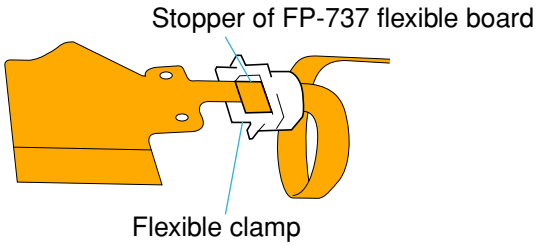
Sheet attachment positions and procedures of processing the flexible boards/harnesses are shown.

THE METHOD OF ATTACHMENT OF FP-737 FLEXIBLE BOARD

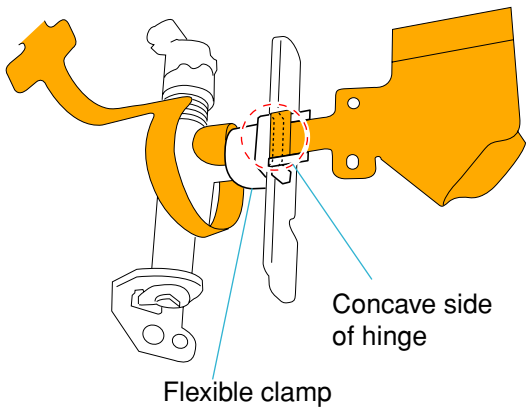
① Fold dotted line parts of the FP-737 flexible board as shown in figure.



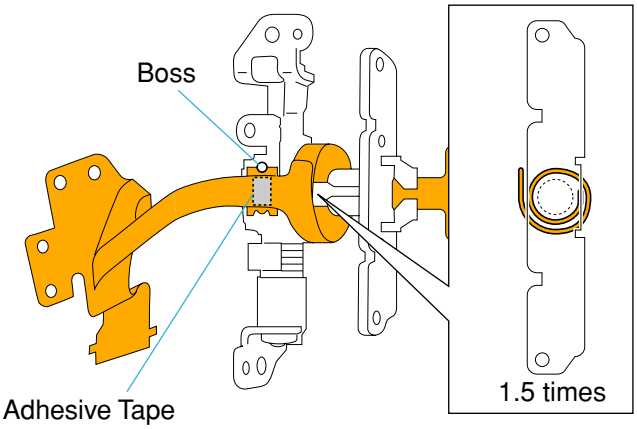
② Pass FP-737 flexible board through the flexible clamp as shown in figure.



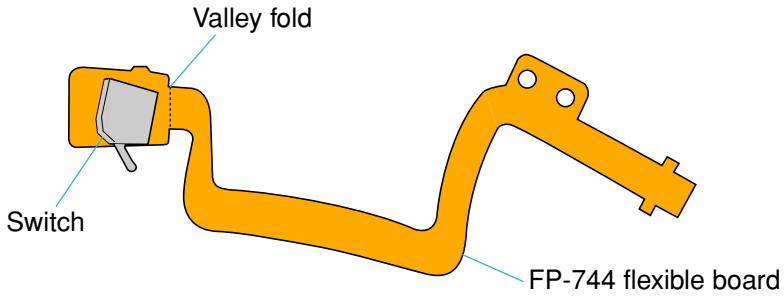
③ Install the flexible clamp in the hinge assy as shown in figure.



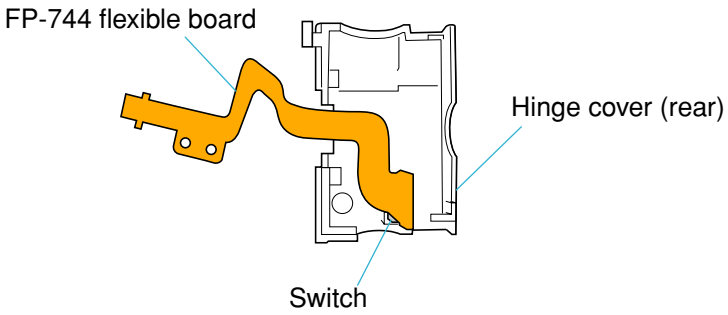
④ Roll the FP-737 flexible board 1.5 times in the hinge assy and put it on the hinge assy with the adhesive tape as shown in figure.



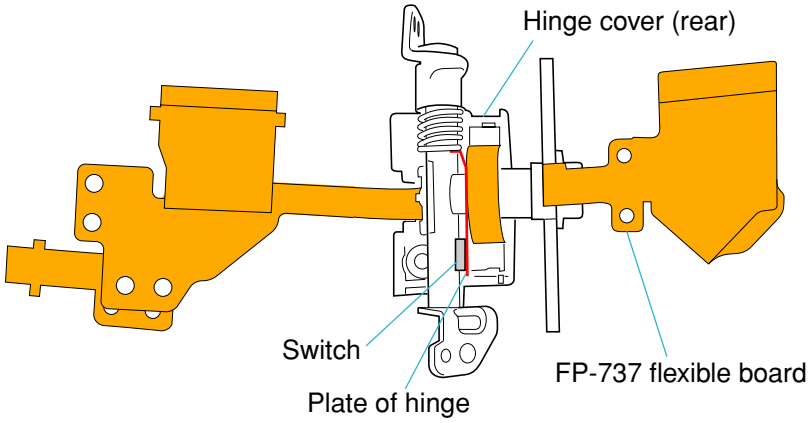
⑤ Fold dotted line parts of the FP-744 flexible board as shown in figure.

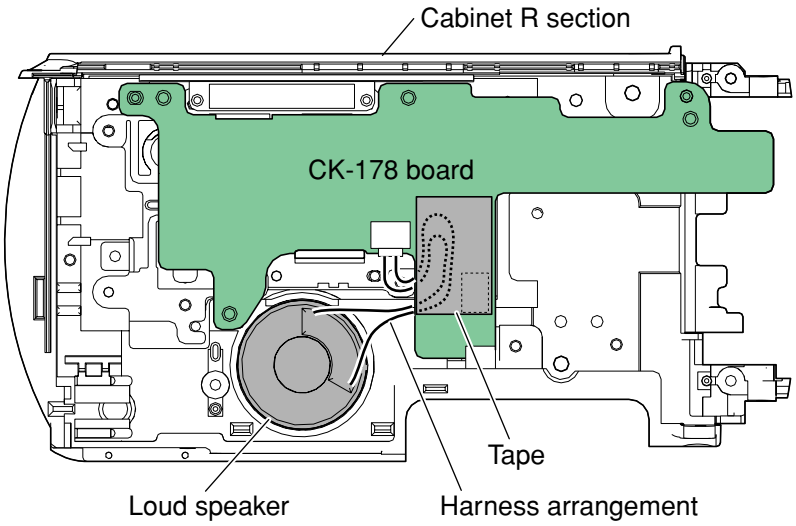


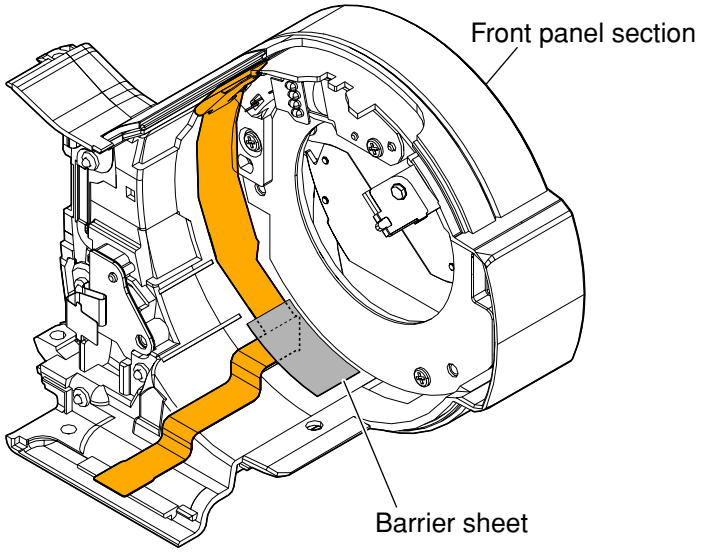
⑥ Install the FP-744 flexible board in the hinge cover (rear) as shown in figure.



⑦ Install the hinge cover (rear) in the hinge assy as shown in figure.




Cabinet R section
CK-178 board
Tape
Loud speaker
Harness arrangement


Front panel section
Barrier sheet

3. BLOCK DIAGRAMS

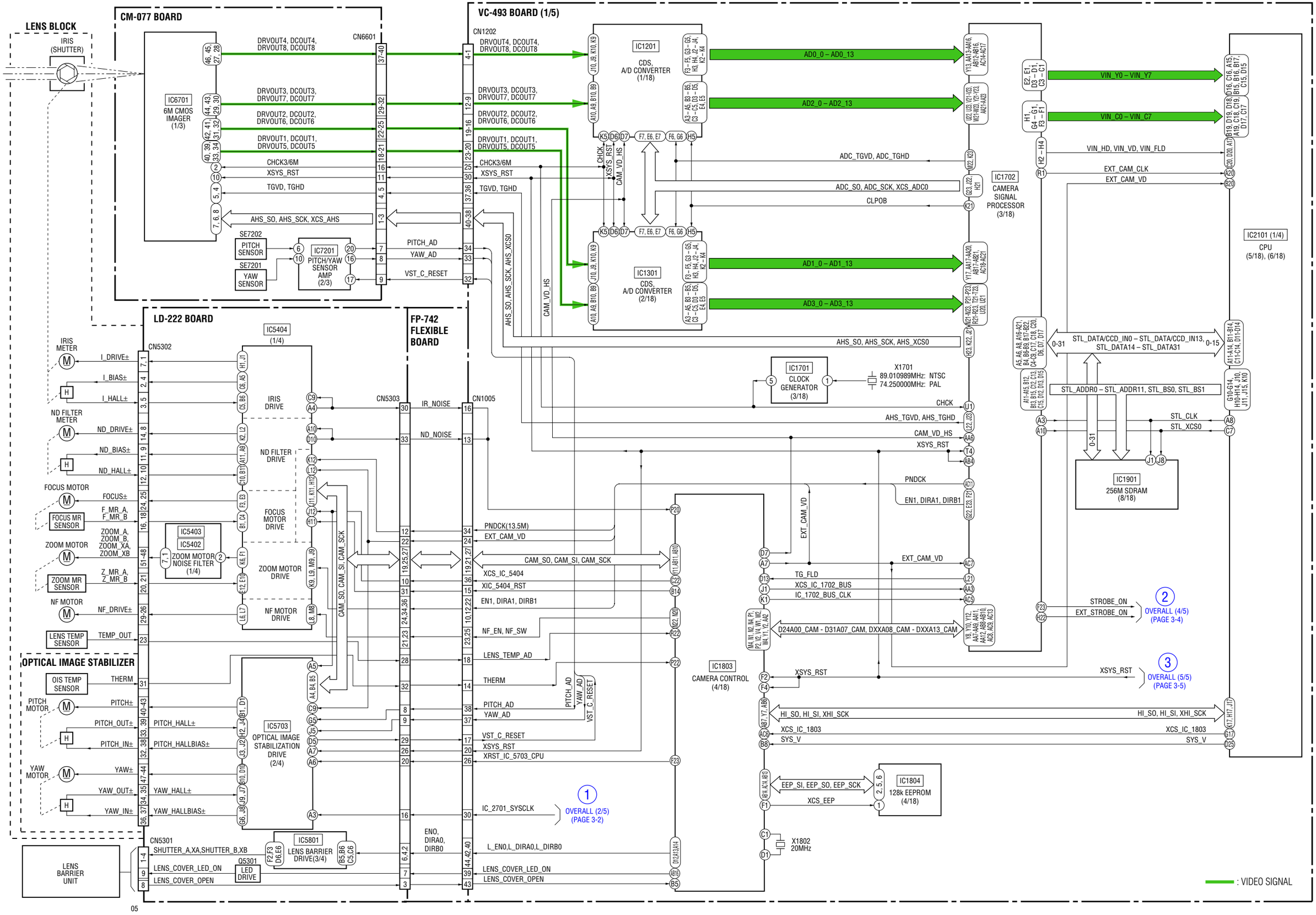
Link

OVERALL BLOCK DIAGRAM (1/5)	OVERALL BLOCK DIAGRAM (5/5)
OVERALL BLOCK DIAGRAM (2/5)	POWER BLOCK DIAGRAM (1/3)
OVERALL BLOCK DIAGRAM (3/5)	POWER BLOCK DIAGRAM (2/3)
OVERALL BLOCK DIAGRAM (4/5)	POWER BLOCK DIAGRAM (3/3)

3. BLOCK DIAGRAMS

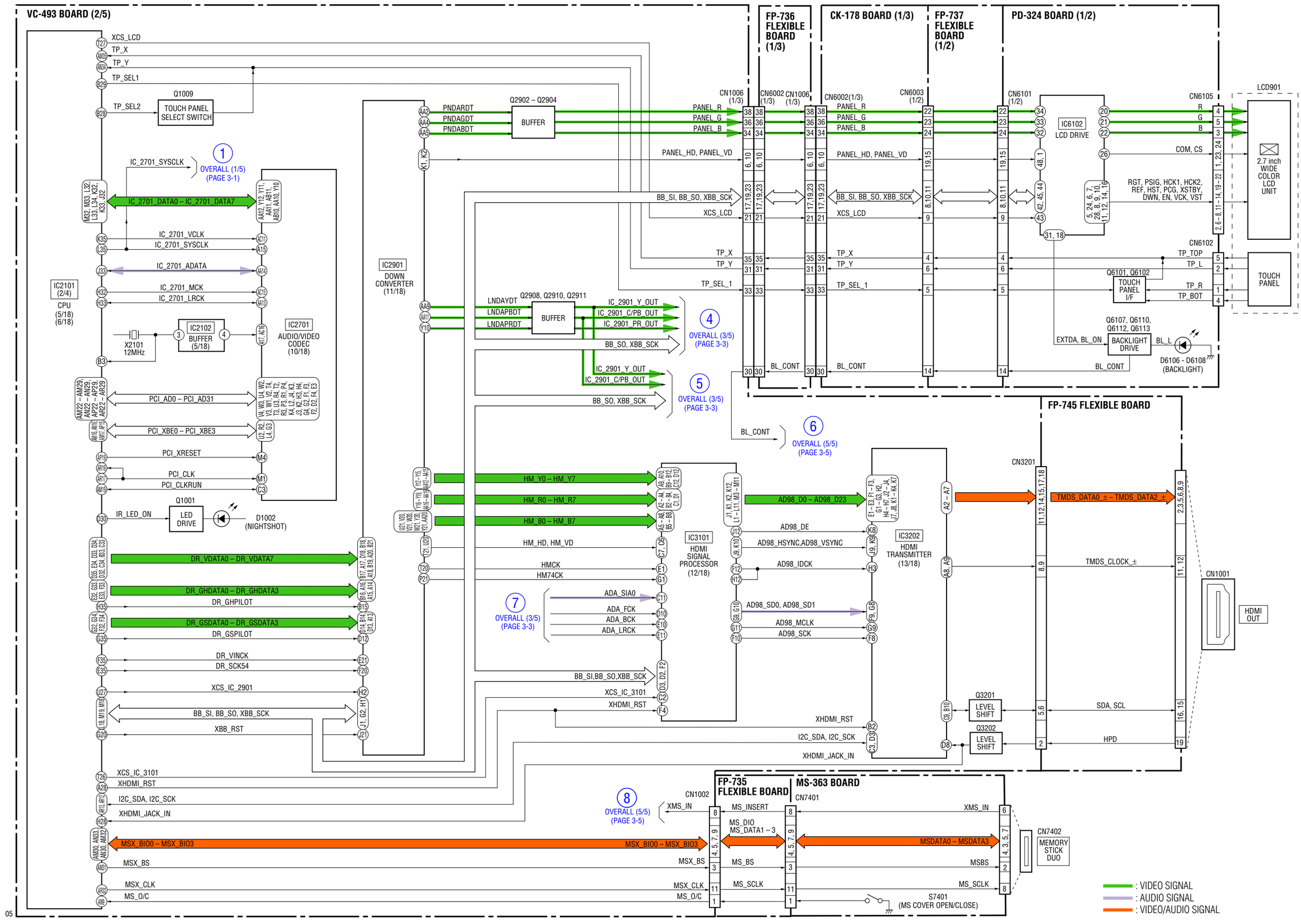
3-1. OVERALL BLOCK DIAGRAM (1/5)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



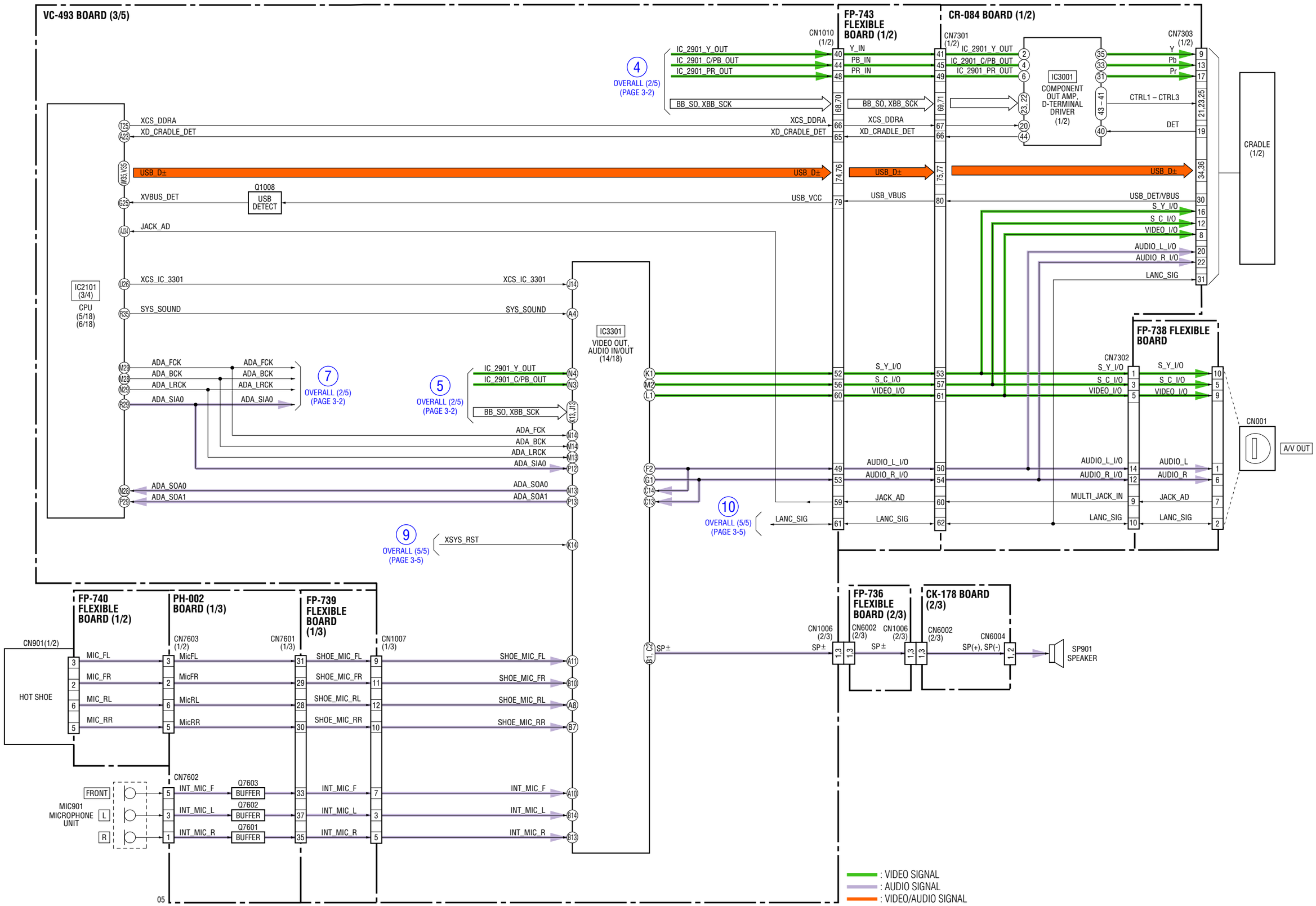
3-2. OVERALL BLOCK DIAGRAM (2/5)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



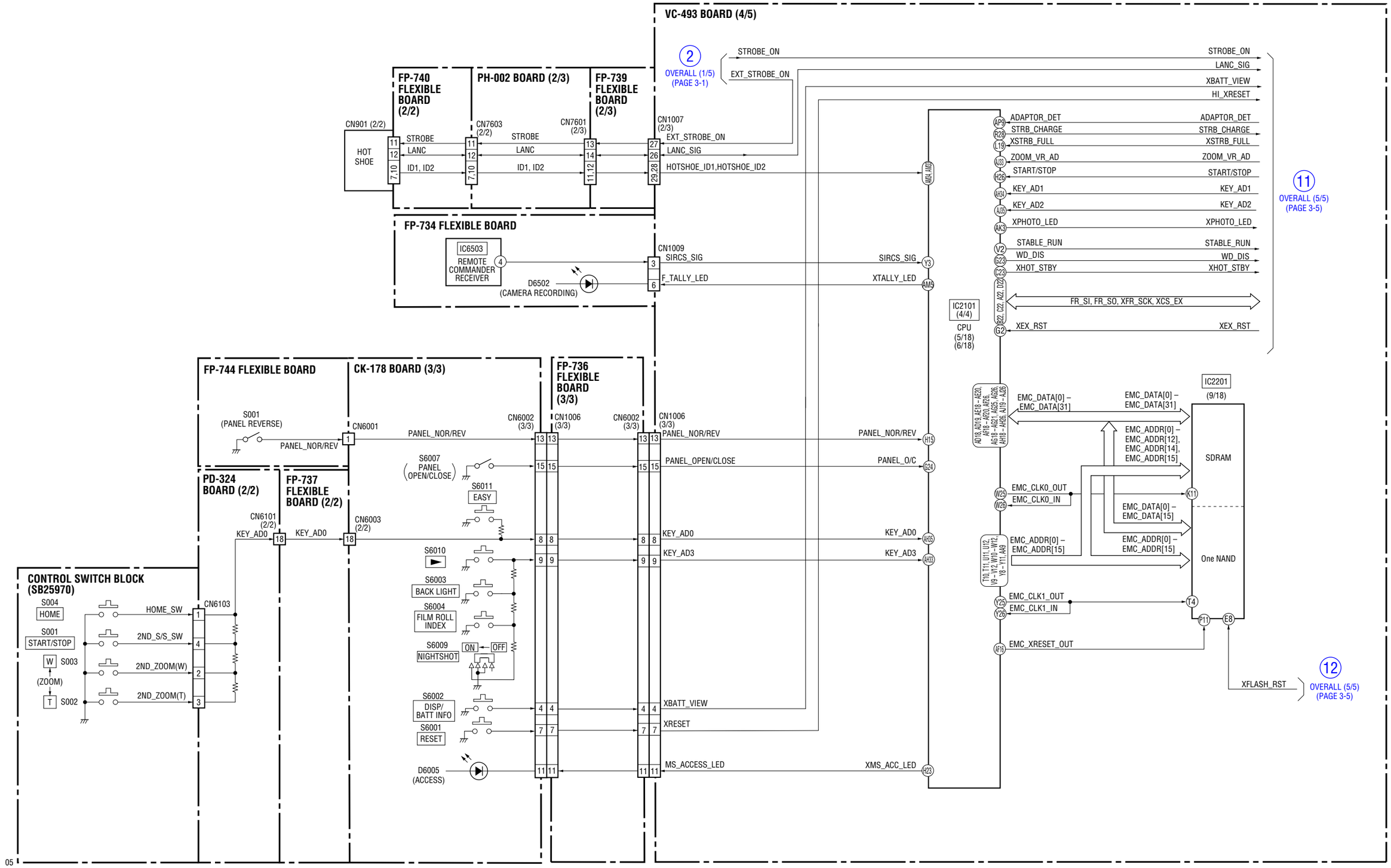
3-3. OVERALL BLOCK DIAGRAM (3/5)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



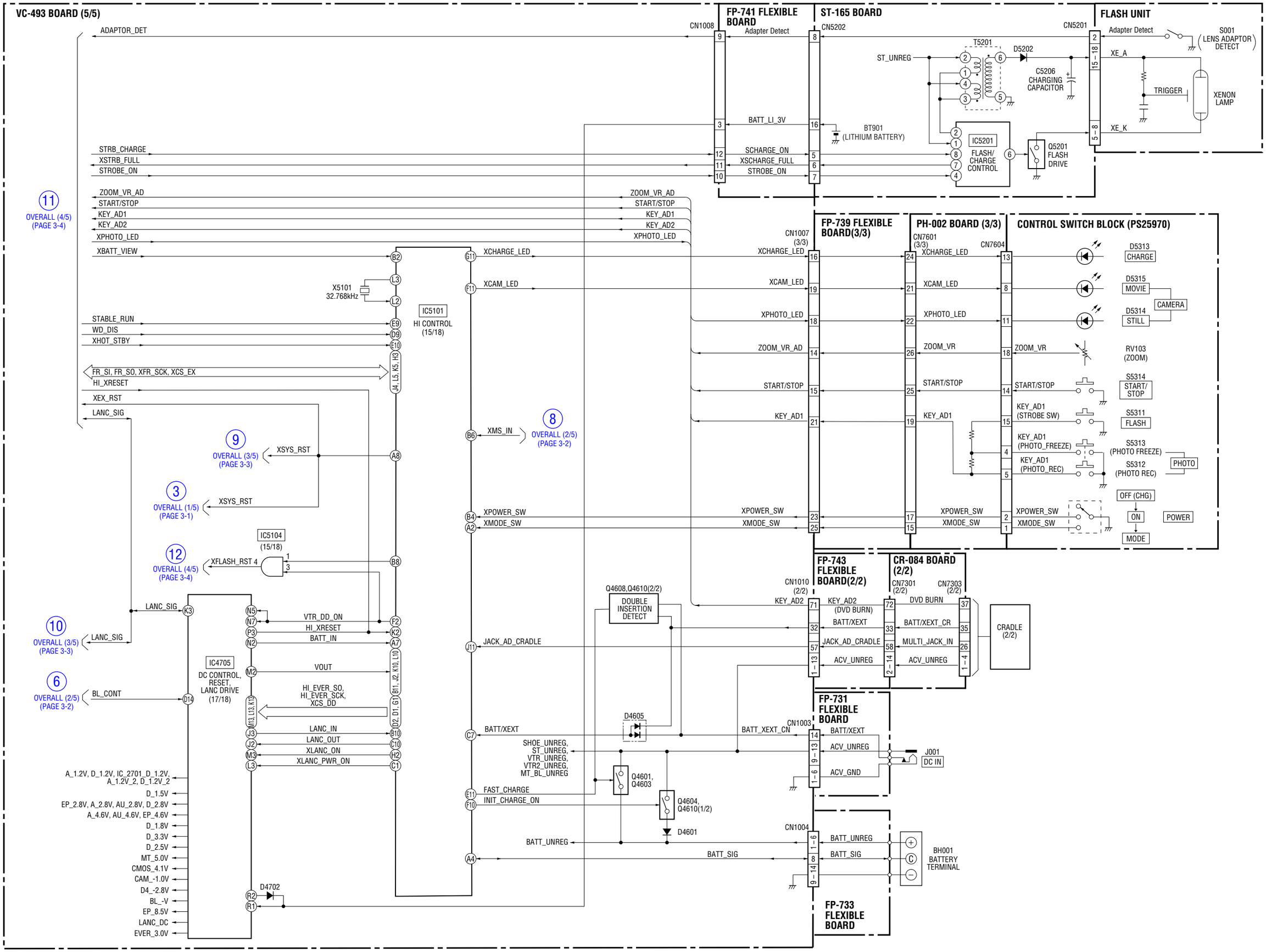
3-4. OVERALL BLOCK DIAGRAM (4/5)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



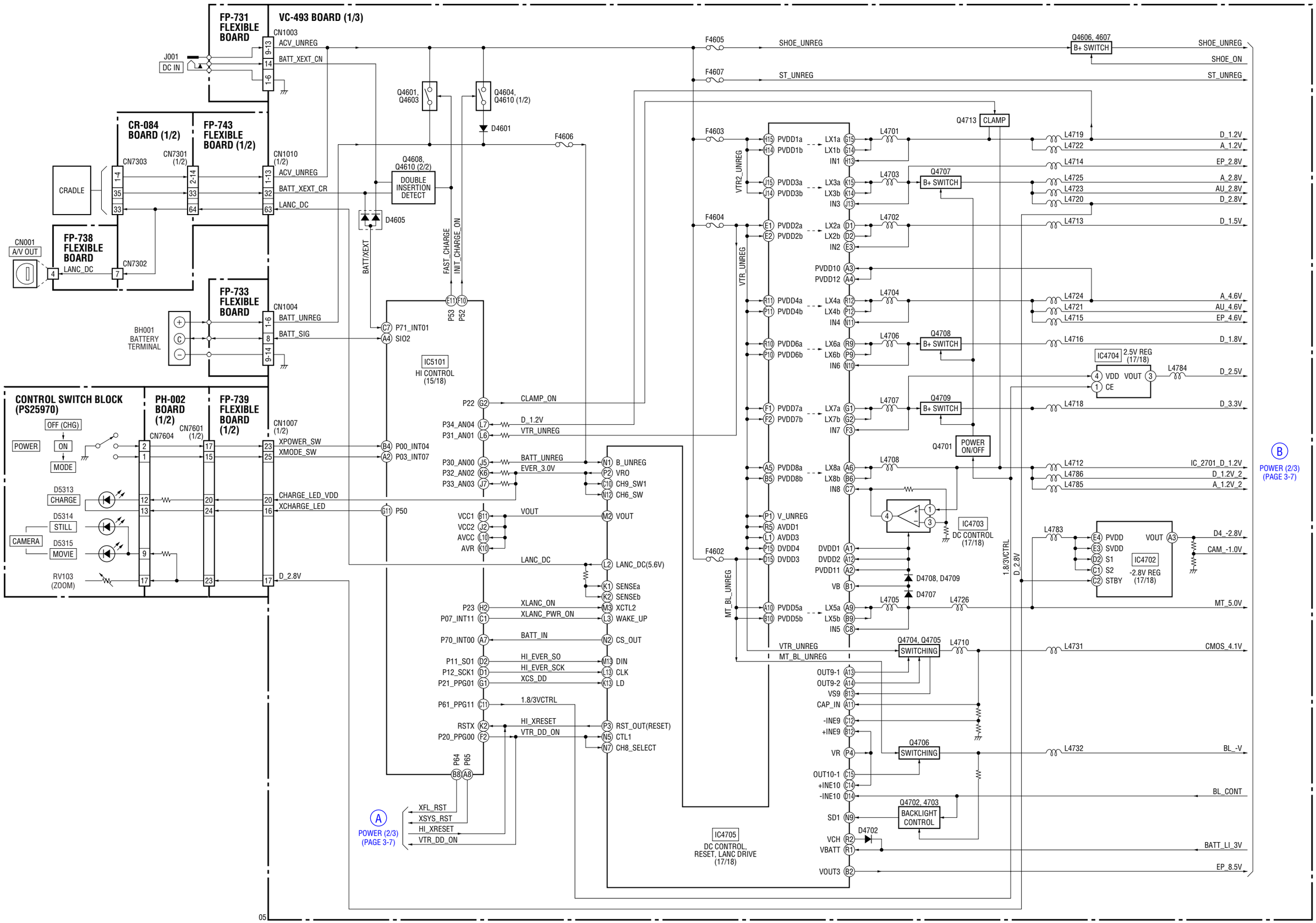
3-5. OVERALL BLOCK DIAGRAM (5/5)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



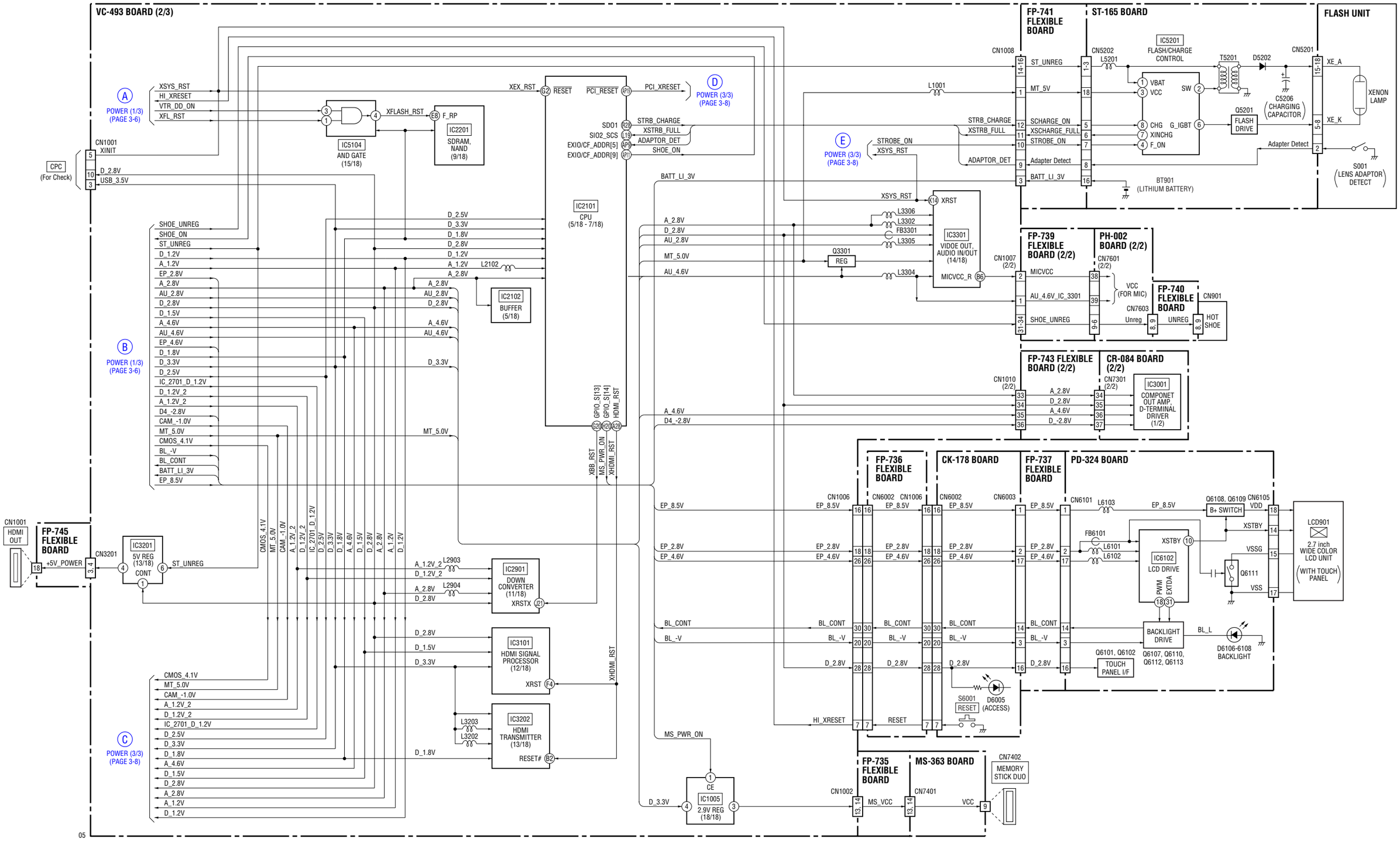
3-6. POWER BLOCK DIAGRAM (1/3)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



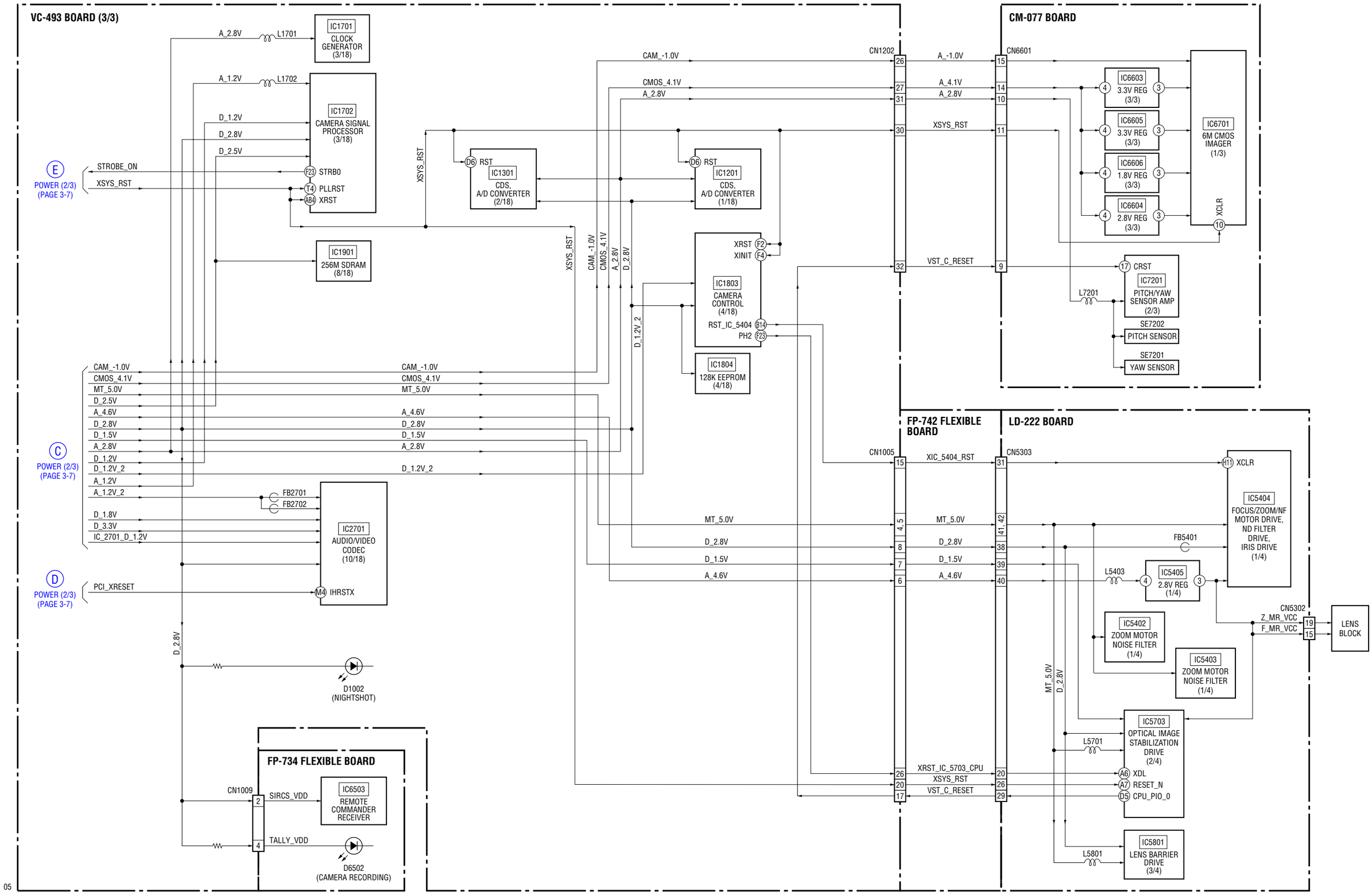
3-7. POWER BLOCK DIAGRAM (2/3)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



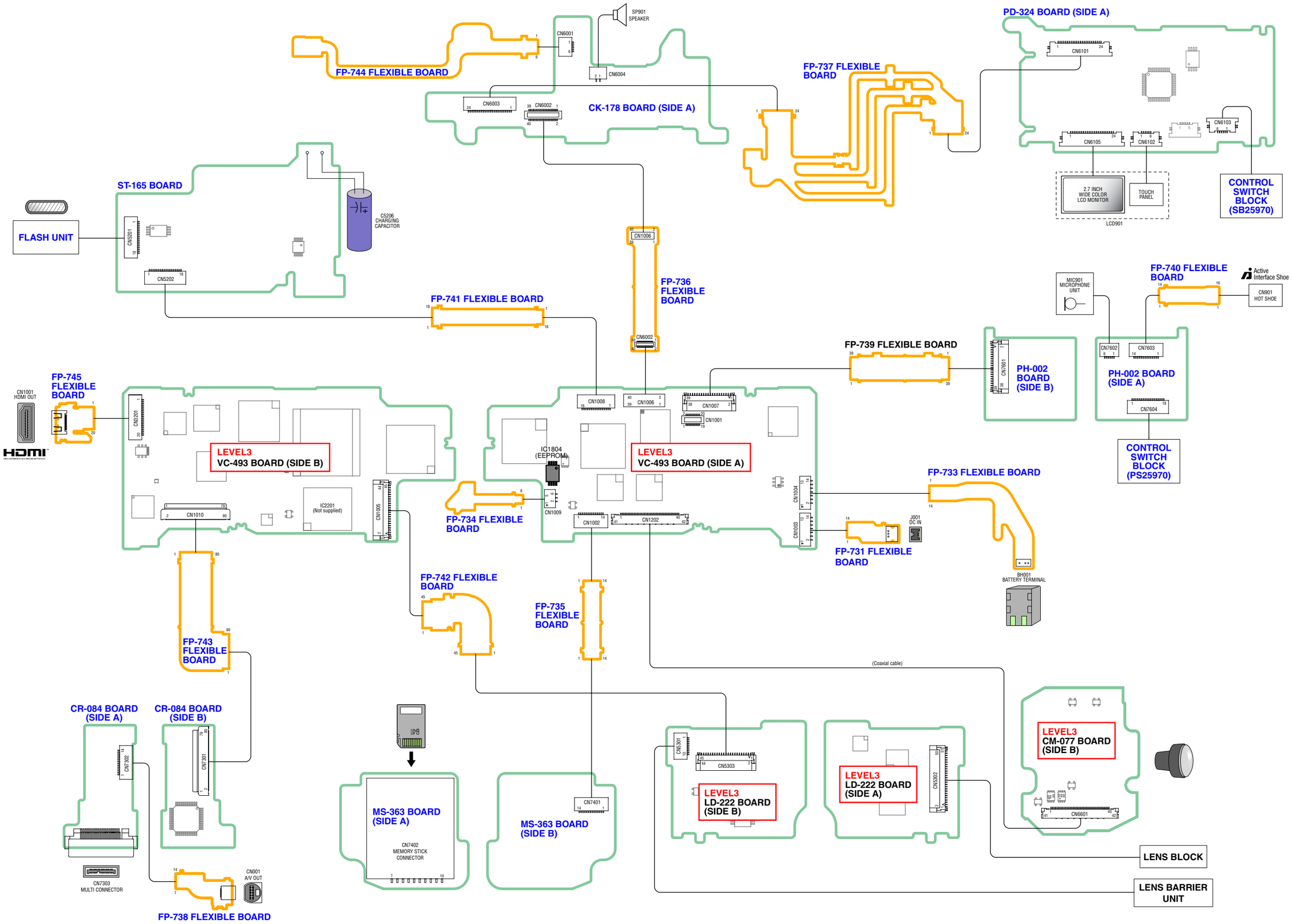
3-8. POWER BLOCK DIAGRAM (3/3)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM



4-2. SCHEMATIC DIAGRAMS

Link

CK-178 BOARD (CONTROL SWITCH)	FP-731 FLEXIBLE BOARD (DC IN)
PD-324 BOARD (LCD DRIVE)	FP-733 FLEXIBLE BOARD (BATTERY TERMINAL)
FP-744 FLEXIBLE BOARD (PANEL REVERSE)	FP-742 FLEXIBLE BOARD (LD-VC CONNECTION)
MS-363 BOARD (MS CONNECTOR)	FP-736 FLEXIBLE BOARD (VC-CK EXTENSION BOARD)
CR-084 BOARD (1/2) (COMPONENT OUT, D-TERMINAL DRIVER)	FP-737 FLEXIBLE BOARD (CK-PD CONNECTION)
CR-084 BOARD (2/2) (CONNECTOR)	FP-735 FLEXIBLE BOARD (VC-MS CONNECTION)
FP-738 FLEXIBLE BOARD (A/V CONNECTOR)	FP-743 FLEXIBLE BOARD (VC-CR CONNECTION)
FP-745 FLEXIBLE BOARD (HDMI CONNECTOR)	FP-739 FLEXIBLE BOARD (VC-PH CONNECTION)
PH-002 BOARD (MIC, HOT SHOE, PS EXTENSION BOARD)	FP-741 FLEXIBLE BOARD (VC-ST CONNECTION)
FP-740 FLEXIBLE BOARD (HOT SHOE)	FLASH UNIT
FP-734 FLEXIBLE BOARD (REMOTE COMMANDER RECEIVER)	CONTROL SWITCH BLOCK (SB25970)
ST-165 BOARD (FLASH DRIVE)	CONTROL SWITCH BLOCK (PS25970)

COMMON NOTE FOR SCHEMATIC DIAGRAMS

4-2. SCHEMATIC DIAGRAMS (ENGLISH)

THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS
(In addition to this, the necessary note is printed in each block)

(For schematic diagrams)

- All capacitors are in μF unless otherwise noted. pF : μμF. 50 V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10 W unless otherwise noted. kΩ=1000 Ω, MΩ=1000 kΩ.
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, Because it is damaged by the heat.
- Some chip part will be indicated as follows.

  Example C541 22U TA A — Kinds of capacitor / Case size
  L452 10UH 2520 — External dimensions (mm)
- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used.
  In such cases, the unused circuits may be indicated.
- Parts with ★ differ according to the model/destination.
  Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
  XEDIT → $\overline{\text{EDIT}}$ PB/XREC → PB/$\overline{\text{REC}}$
- : non flammable resistor
- : fusible resistor
- : panel designation
- : B+ Line
- : B– Line
- : IN/OUT direction of (+,–) B LINE.
- : adjustment for repair.

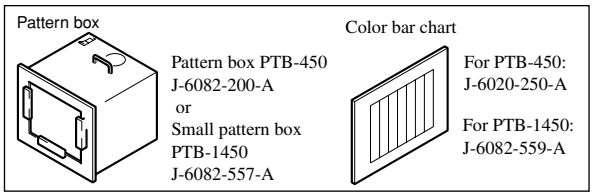
(Measuring conditions voltage and waveform)

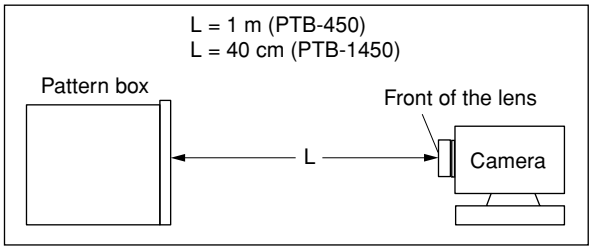
- Voltages and waveforms are measured between the measurement points and ground when camera shoots color bar chart of pattern box. They are reference values and reference waveforms.
  (VOM of DC 10 MΩ input impedance is used)
- Voltage values change depending upon input impedance of VOM used.)

Precautions for Replacement of Imager

- If the imager has been replaced, carry out all the adjustments for the camera section.
- As the imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC.
  In addition, ensure that the receiver is not covered with dusts nor exposed to strong light.

1. Connection





2. Adjust the distance so that the output waveform of Fig. a and the Fig. b can be obtain.

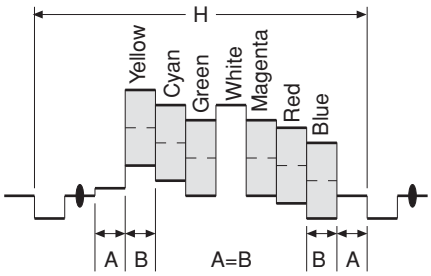


Fig. a (Video output terminal output waveform)

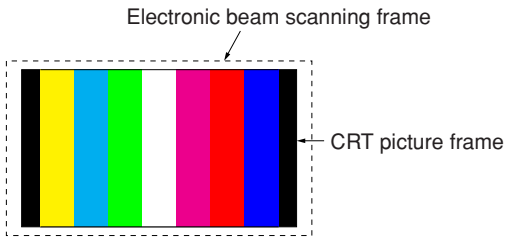


Fig.b (Picture on monitor TV)

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifie.

(JAPANESE)

回路図共通ノート
（他に必要なノートは各ブロックに記載してあります）
【回路図ノート】
・ケミコン，タンタルを除くコンデンサで，耐圧50V以下のものはその耐圧を省略。単位はすべてμF（pはpF）。
・チップ抵抗で指示のないものは，1／10W以下。
kΩ＝1000Ω，MΩ＝1000kΩ
・チップ部品交換時の注意
取り外した部品は再使用せず，未使用の部品をご使用ください。
タンタルコンデンサのマイナス側は熱に弱いため注意してください。
・チップ部品には下記のように表示したものがあります。

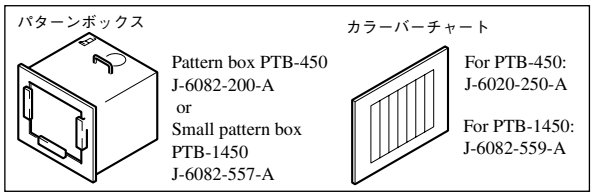
例	C 541	L 452
	22U	10UH
	TA A	2520
	↑ ↑	↑
	種類 ケースサイズ	外形寸法（mm）

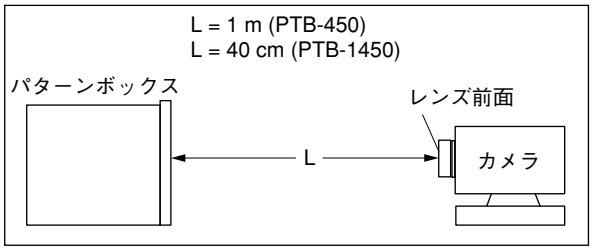
・抵抗，コンデンサ，ICなど定数にXXがあるものは，使用していない事を示しています。このため，使用していない回路が記載されている事があります。
・★印のある部品は，機種などにより異なりますので機能別マウント一覧表を参照してください。
・可変抵抗と半固定抵抗で，B特性の表示を省略。
・信号名表記について，下記のような場合があります。
XEDIT → $\overline{\text{EDIT}}$　　PB/XREC → PB/$\overline{\text{REC}}$
・ は不燃性抵抗。
・ はヒューズ抵抗。
・ はパネル表示名称。
・はB＋ライン。
・はB－ライン。
・ はBライン（＋，－）の入出力方向を示す。
・ は調整名称。

【電圧・波形測定条件ノート】
・電圧値及び信号波形はパターンボックスのカラーバーチャートを被写体としたときの測定点対アース間の参考値。
（デジタルマルチメータ；入力インピーダンス　DC10MΩ使用）
・使用テスタの入力インピーダンスにより電圧値が多少異なります。

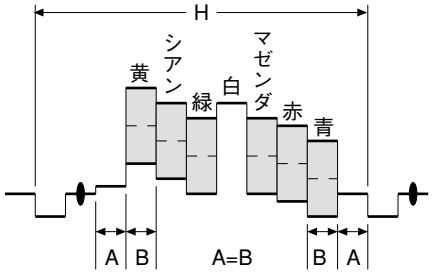
イメージャ交換時の注意
・イメージャを交換した場合は，カメラ部の全調整を行ってください。
・イメージャは構造上，静電気により破壊される恐れがあるため，MOS ICと同様に注意して取り扱ってください。
また，受光部にはゴミの付着，および強い光がはいることのないように注意してください。

1. 接続図

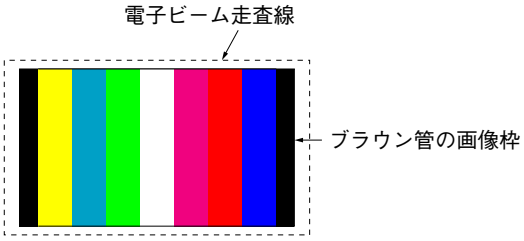




2. 図a及び図bの波形が得られるように画枠調整して下さい。



図a（映像入出力端子出力波形）

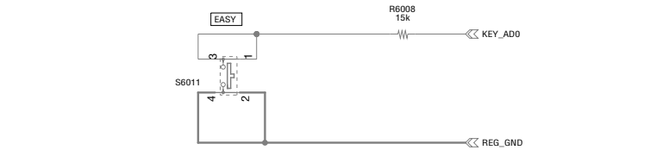


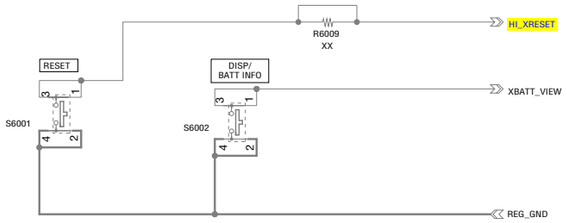
図b（テレビモニタの映像）

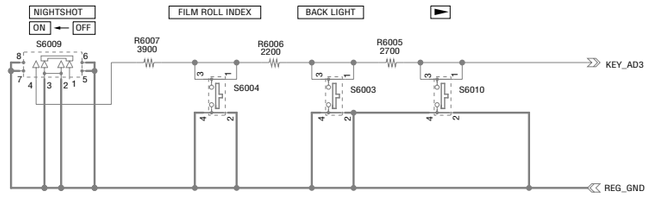
⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

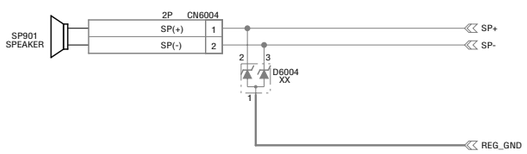
お願い
図面番号で部品を指定するときは基板名又はブロックを併せて指定して下さい。

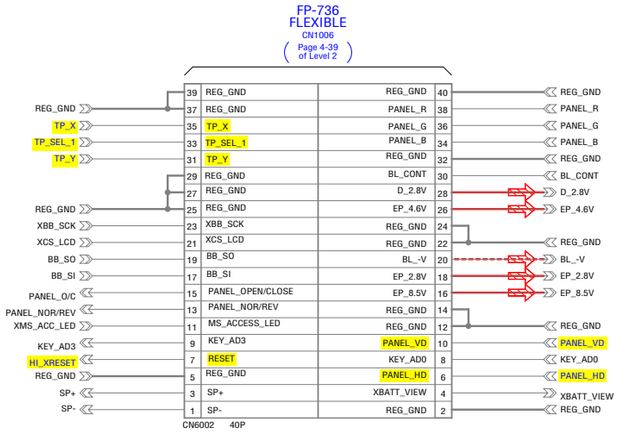
Schematic diagrams of the CM-077, VC-493 and LD-222 boards are not shown.
Pages from 4-4 to 4-28 are not shown.

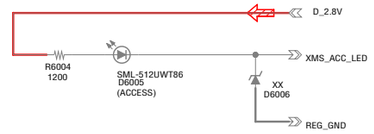


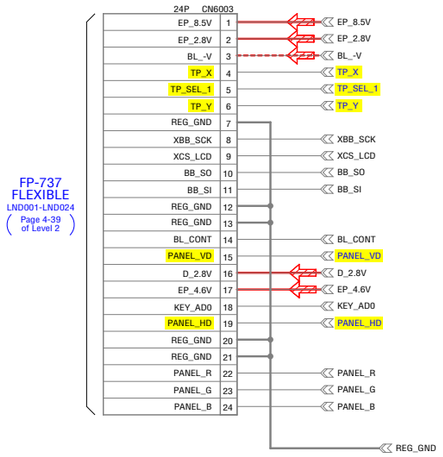


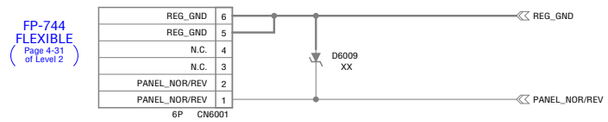


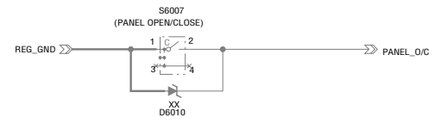








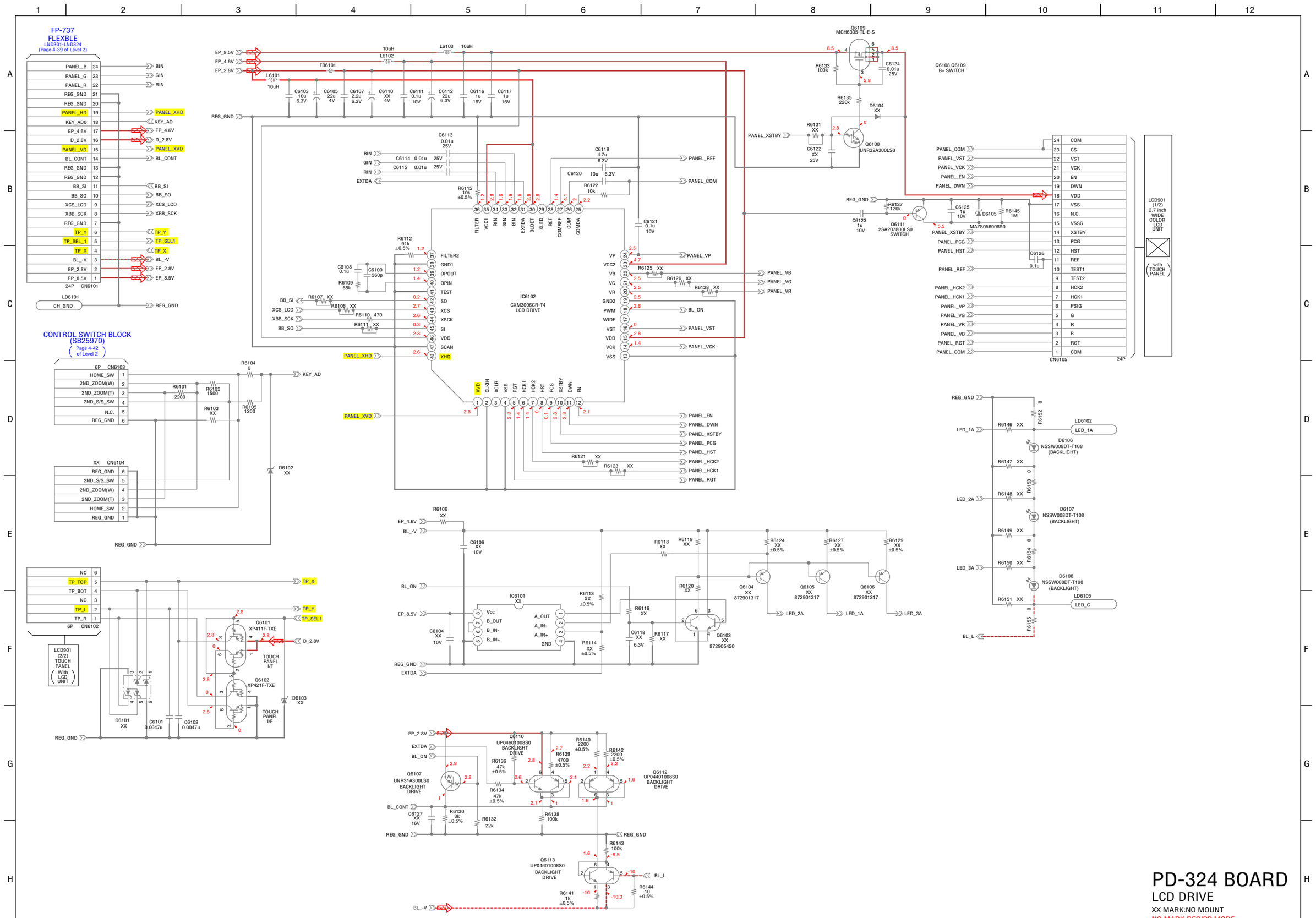




CK-178 BOARD

CONTROL SWITCH

XX MARK:NO MOUNT

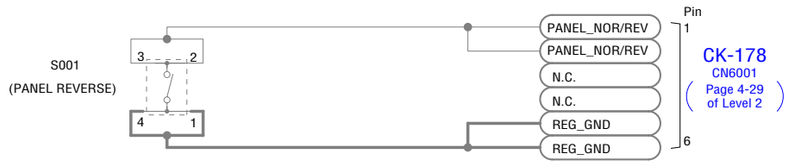


PD-324 BOARD

LCD DRIVE

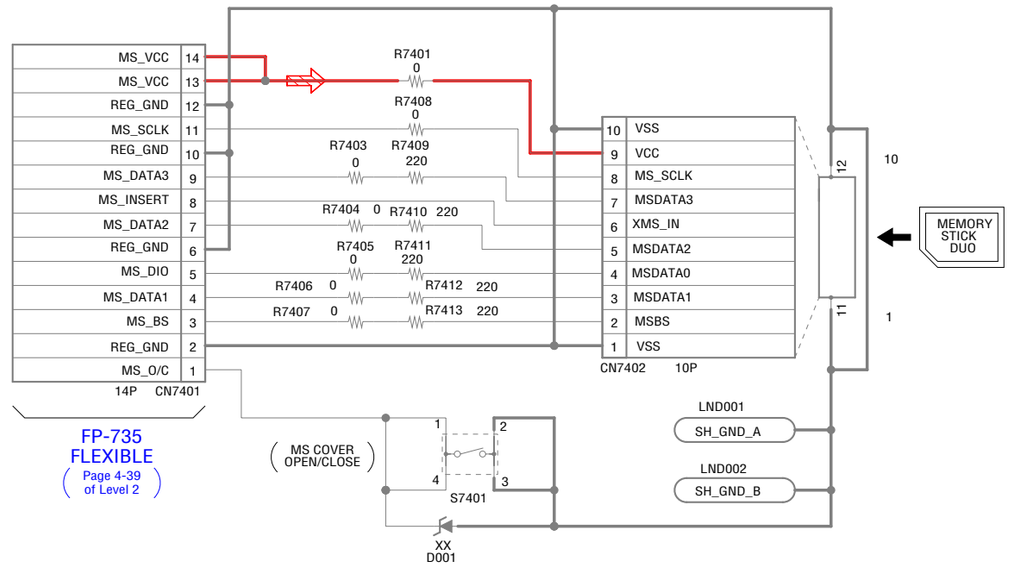
XX MARK:NO MOUNT

NO MARK:REC/PB MODE



FP-744 FLEXIBLE BOARD

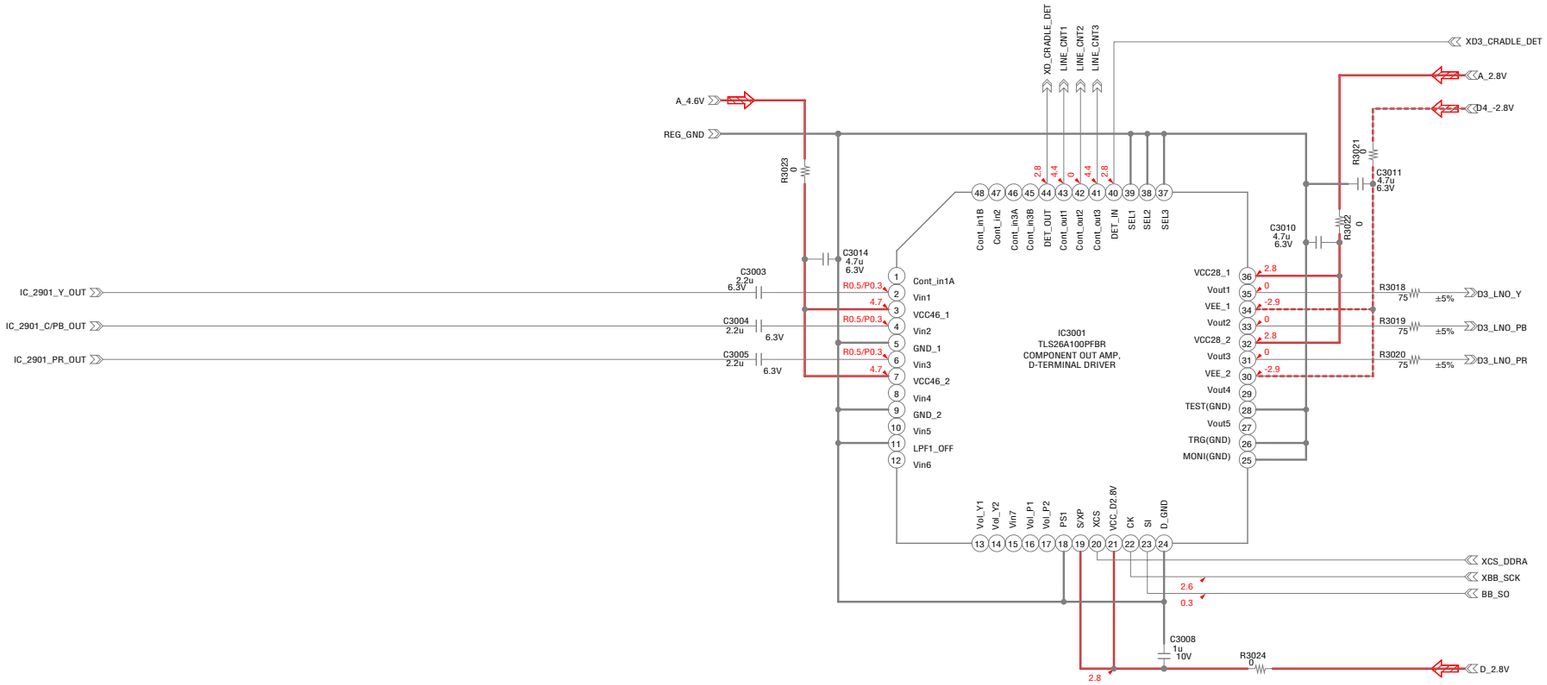
PANEL REVERSE



MS-363 BOARD

MS CONNECTOR

XX MARK:NO MOUNT

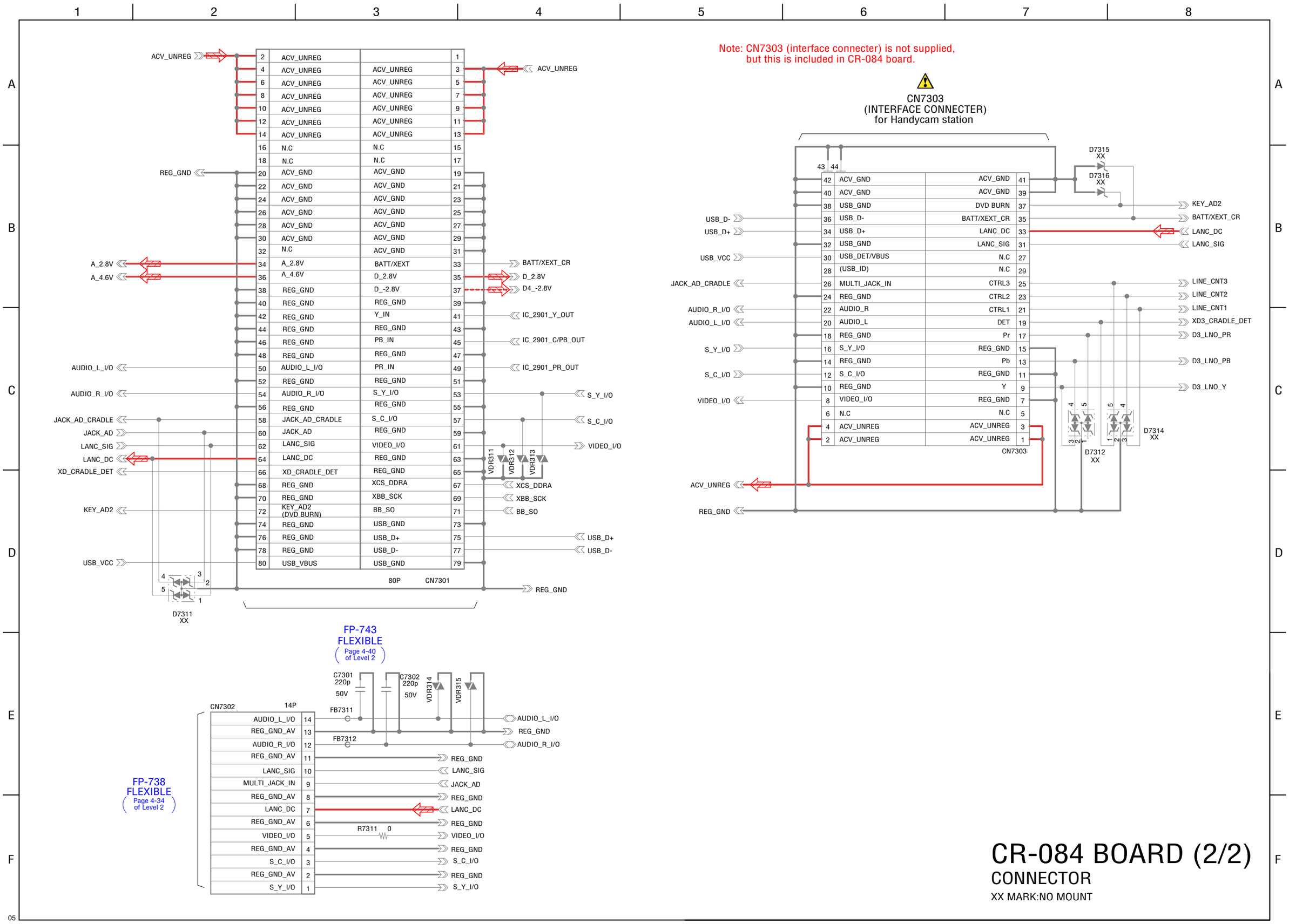


CR-084 BOARD (1/2)

COMPONENT OUT, D-TERMINAL DRIVER

XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE

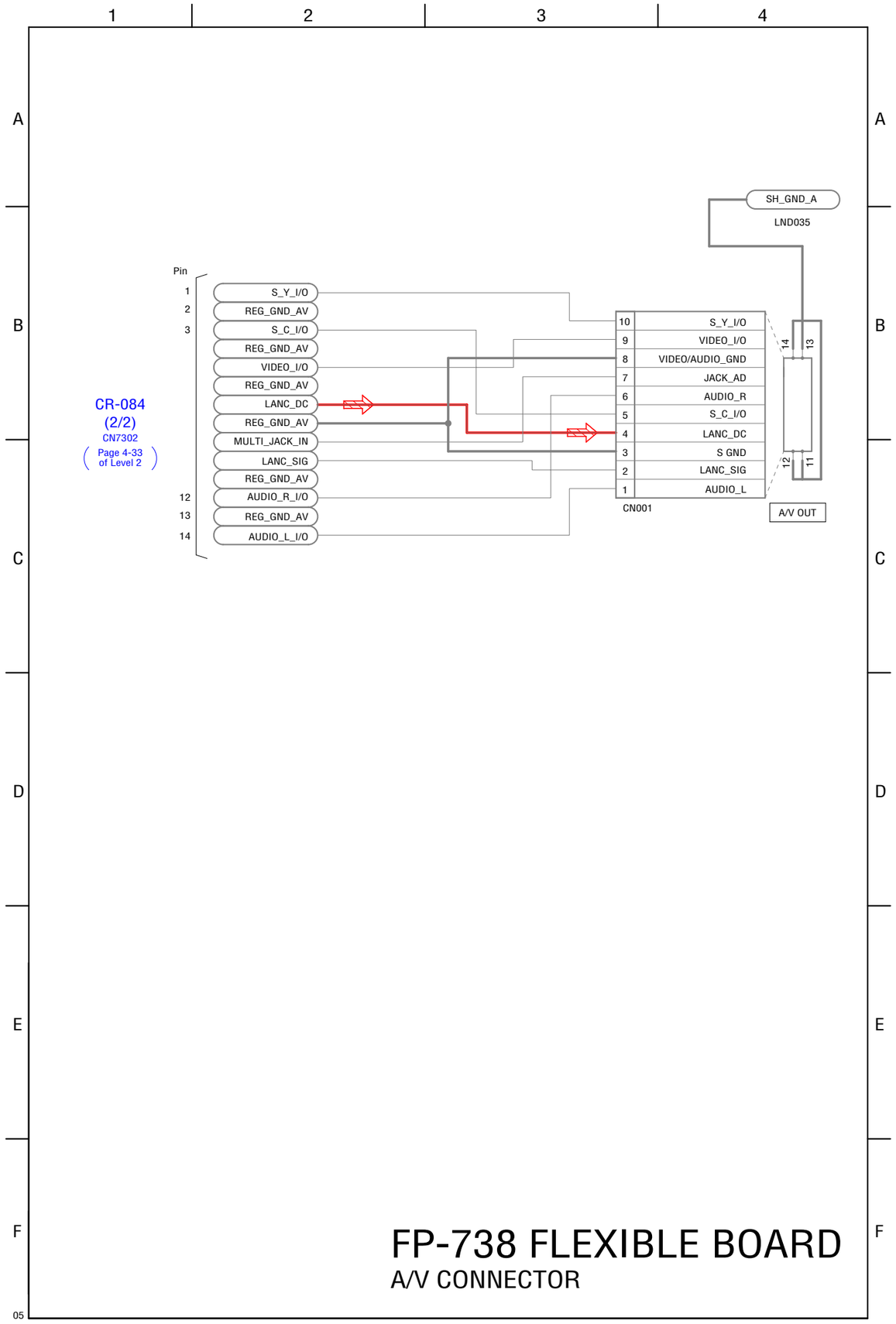
• Refer to page 4-2 (English), 4-3 (Japanese) for mark ⚠.

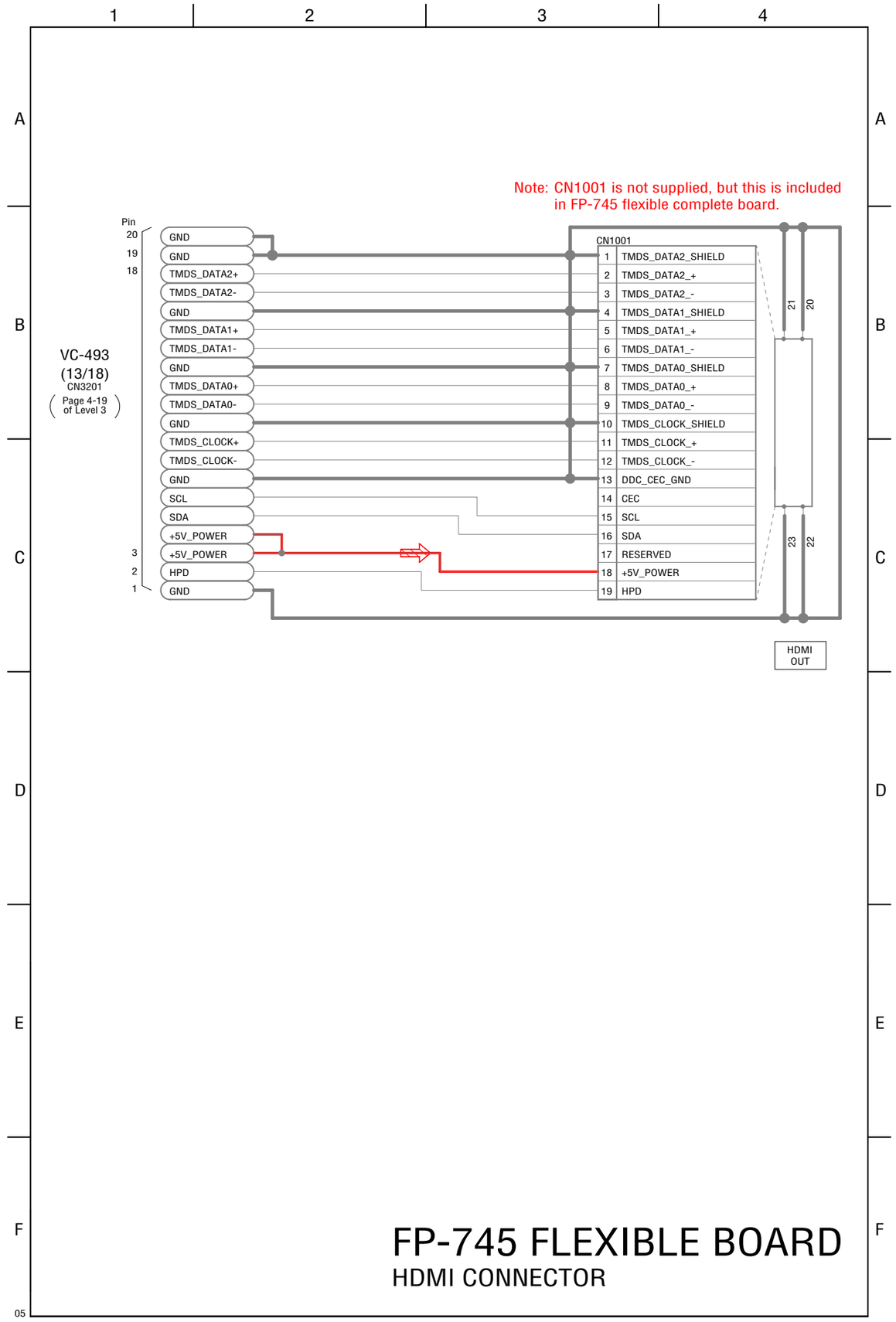


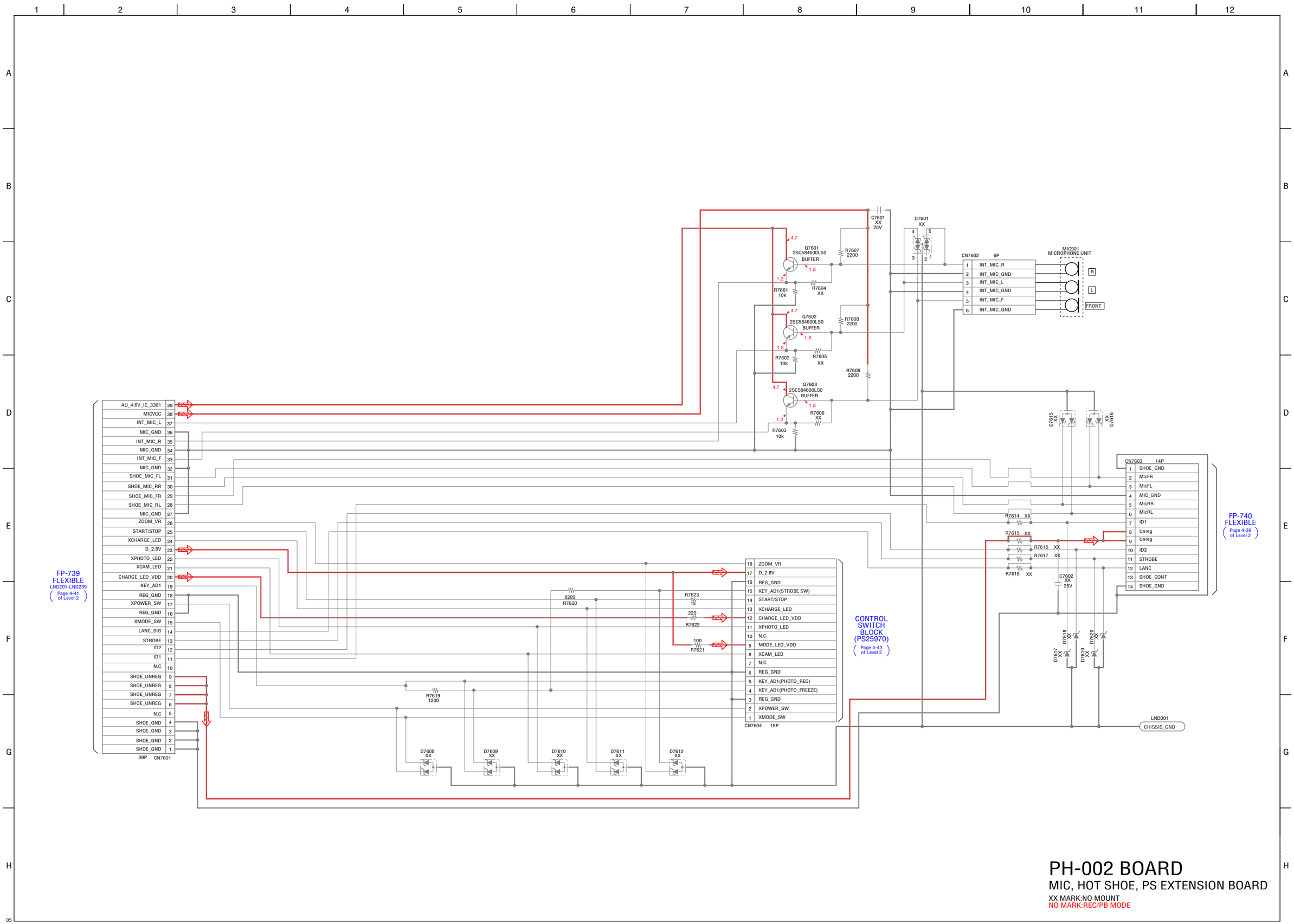
CR-084 BOARD (2/2)

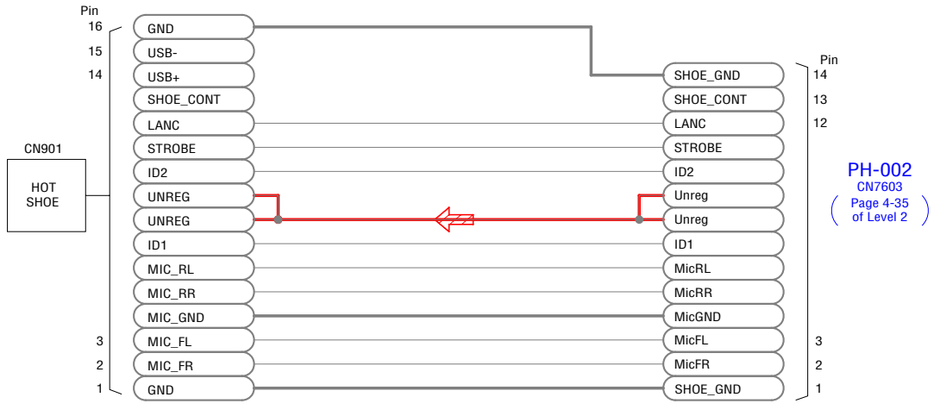
CONNECTOR

XX MARK:NO MOUNT


1
2
3
4
A
B
C
D
E
F
05
CR-084
(2/2)
CN7302
Page 4-33
of Level 2
Pin
1
2
3
12
13
14
S_Y_I/O
REG_GND_AV
S_C_I/O
REG_GND_AV
VIDEO_I/O
REG_GND_AV
LANC_DC
REG_GND_AV
MULTI_JACK_IN
LANC_SIG
REG_GND_AV
AUDIO_R_I/O
REG_GND_AV
AUDIO_L_I/O
10 S_Y_I/O
9 VIDEO_I/O
8 VIDEO/AUDIO_GND
7 JACK_AD
6 AUDIO_R
5 S_C_I/O
4 LANC_DC
3 S GND
2 LANC_SIG
1 AUDIO_L
CN001
SH_GND_A
LND035
14
13
12
11
A/V OUT
FP-738 FLEXIBLE BOARD
A/V CONNECTOR


1
2
3
4
A
B
C
D
E
F
05
Note: CN1001 is not supplied, but this is included
in FP-745 flexible complete board.
VC-493
(13/18)
CN3201
Page 4-19
of Level 3
Pin
20
19
18
3
2
1
GND
GND
TMDS_DATA2+
TMDS_DATA2-
GND
TMDS_DATA1+
TMDS_DATA1-
GND
TMDS_DATA0+
TMDS_DATA0-
GND
TMDS_CLOCK+
TMDS_CLOCK-
GND
SCL
SDA
+5V_POWER
+5V_POWER
HPD
GND
CN1001
1 TMDS_DATA2_SHIELD
2 TMDS_DATA2_+
3 TMDS_DATA2_-
4 TMDS_DATA1_SHIELD
5 TMDS_DATA1_+
6 TMDS_DATA1_-
7 TMDS_DATA0_SHIELD
8 TMDS_DATA0_+
9 TMDS_DATA0_-
10 TMDS_CLOCK_SHIELD
11 TMDS_CLOCK_+
12 TMDS_CLOCK_-
13 DDC_CEC_GND
14 CEC
15 SCL
16 SDA
17 RESERVED
18 +5V_POWER
19 HPD
21
20
23
22
HDMI
OUT
FP-745 FLEXIBLE BOARD
HDMI CONNECTOR

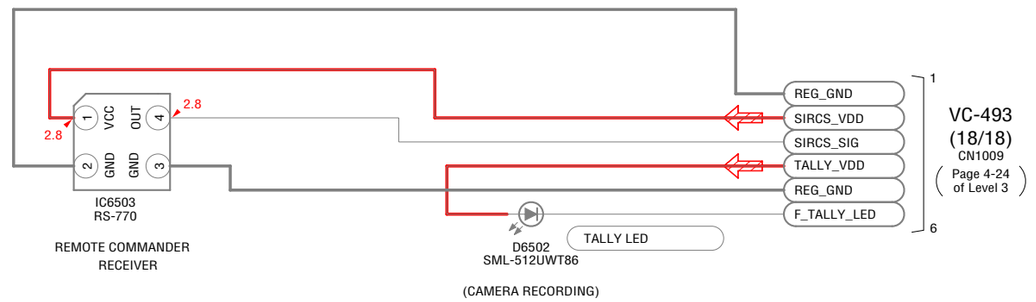

AU_4.6V_IC_3301 39
MICVCC 38
INT_MIC_L 37
MIC_GND 36
INT_MIC_R 35
MIC_GND 34
INT_MIC_F 33
MIC_GND 32
SHOE_MIC_FL 31
SHOE_MIC_RR 30
SHOE_MIC_FR 29
SHOE_MIC_RL 28
MIC_GND 27
ZOOM_VR 26
START/STOP 25
XCHARGE_LED 24
D_2.8V 23
XPHOTO_LED 22
XCAM_LED 21
CHARGE_LED_VDD 20
KEY_AD1 19
REG_GND 18
XPOWER_SW 17
REG_GND 16
XMODE_SW 15
LANC_SIG 14
STROBE 13
ID2 12
ID1 11
N.C 10
SHOE_UNREG 9
SHOE_UNREG 8
SHOE_UNREG 7
SHOE_UNREG 6
N.C 5
SHOE_GND 4
SHOE_GND 3
SHOE_GND 2
SHOE_GND 1
39P CN7601
FP-739 FLEXIBLE
LND201-LND239
Page 4-41 of Level 2
Q7601 2SC584600LS0 BUFFER
Q7602 2SC584600LS0 BUFFER
Q7603 2SC584600LS0 BUFFER
4.7
1.8
1.2
R7601 10k
R7602 10k
R7603 10k
R7604 XX
R7605 XX
R7606 XX
R7607 2200
R7608 2200
R7609 2200
C7601 XX 25V
D7601 XX
CN7602 6P
1 INT_MIC_R
2 INT_MIC_GND
3 INT_MIC_L
4 INT_MIC_GND
5 INT_MIC_F
6 INT_MIC_GND
MIC901 MICROPHONE UNIT
R
L
FRONT
D7615 XX
D7616 XX
CN7603 14P
1 SHOE_GND
2 MicFR
3 MicFL
4 MIC_GND
5 MicRR
6 MicRL
7 ID1
8 Unreg
9 Unreg
10 ID2
11 STROBE
12 LANC
13 SHOE_CONT
14 SHOE_GND
FP-740 FLEXIBLE
Page 4-36 of Level 2
R7614 XX
R7615 XX
R7616 XX
R7617 XX
R7618 XX
C7602 XX 25V
D7617 XX
D7618 XX
D7619 XX
D7620 XX
LND001
CHISSIS_GND
8200 R7620
R7623 1k
220 R7622
100 R7621
R7619 1200
D7608 XX
D7609 XX
D7610 XX
D7611 XX
D7612 XX
18 ZOOM_VR
17 D_2.8V
16 REG_GND
15 KEY_AD1(STROBE SW)
14 START/STOP
13 XCHARGE_LED
12 CHARGE_LED_VDD
11 XPHOTO_LED
10 N.C.
9 MODE_LED_VDD
8 XCAM_LED
7 N.C.
6 REG_GND
5 KEY_AD1(PHOTO_REC)
4 KEY_AD1(PHOTO_FREEZE)
3 REG_GND
2 XPOWER_SW
1 XMODE_SW
CN7604 18P
CONTROL SWITCH BLOCK (PS25970)
Page 4-43 of Level 2
PH-002 BOARD
MIC, HOT SHOE, PS EXTENSION BOARD
XX MARK:NO MOUNT
NO MARK:REC/PB MODE



FP-740 FLEXIBLE BOARD

HOT SHOE

(PRINTED WIRING BOARD is omitted.)

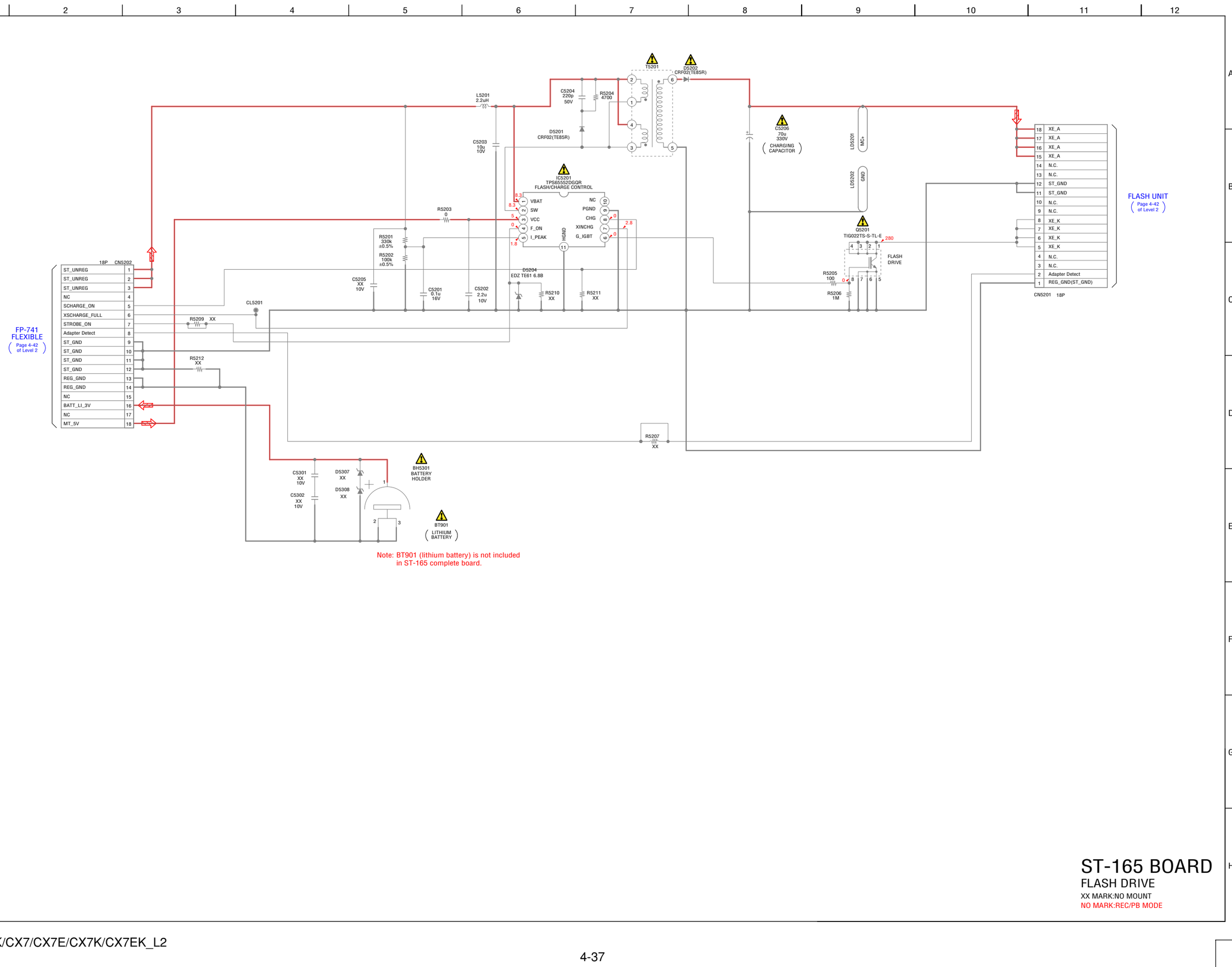


FP-734 FLEXIBLE BOARD

REMOTE COMMANDER RECEIVER

NO MARK:REC/PB MODE

• Refer to page 4-2 (English), 4-3 (Japanese) for mark ⚠.



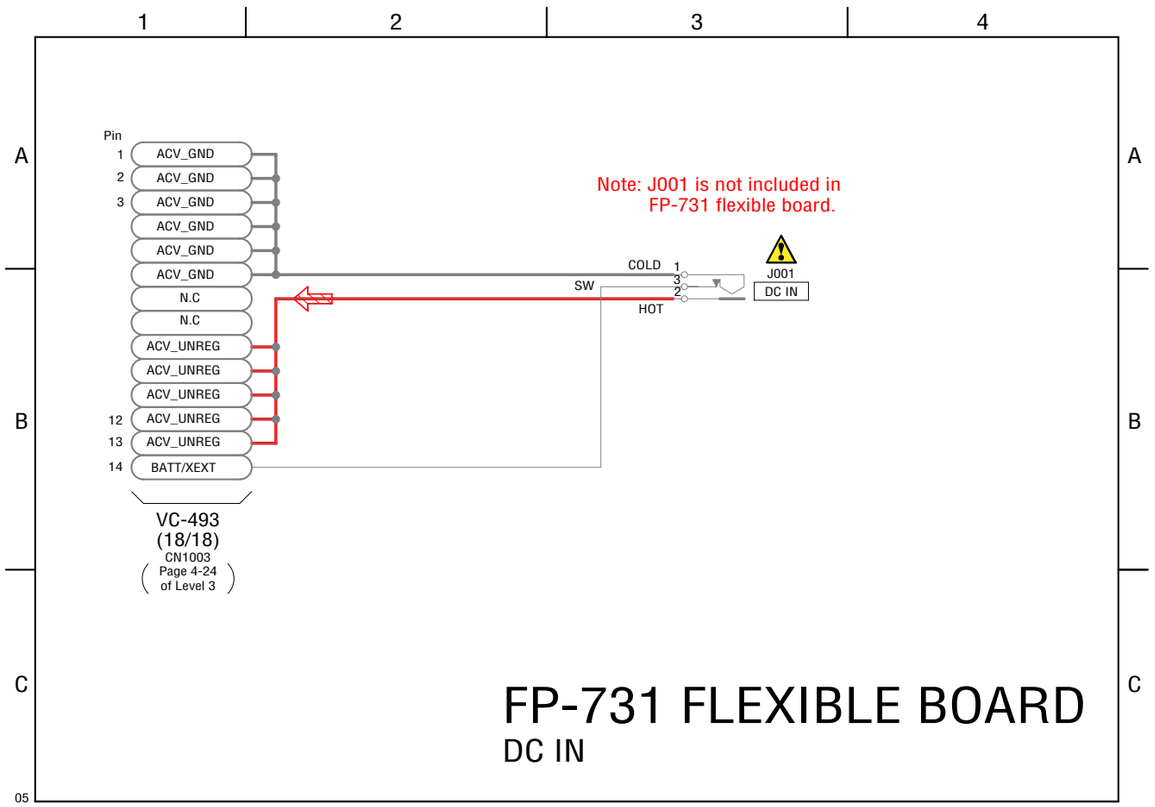
ST-165 BOARD

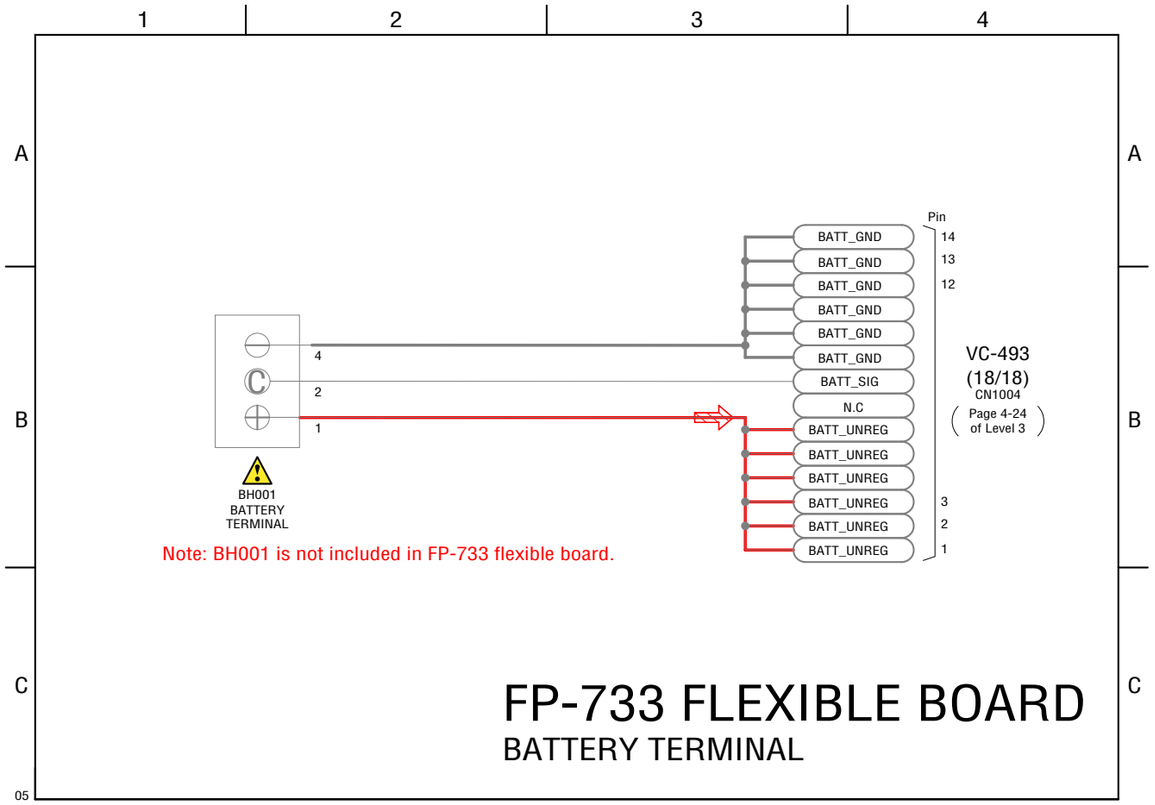
FLASH DRIVE

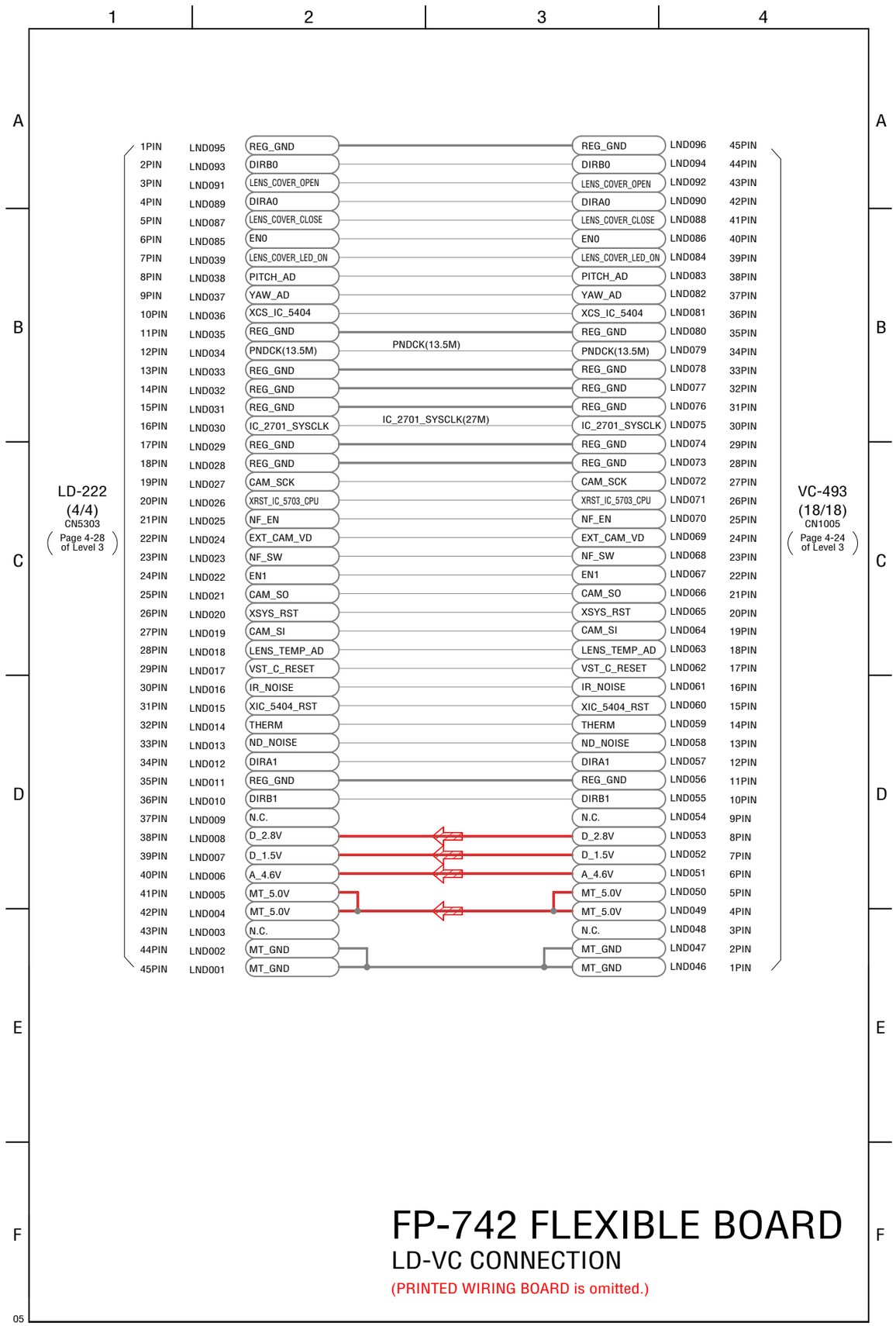
XX MARK:NO MOUNT

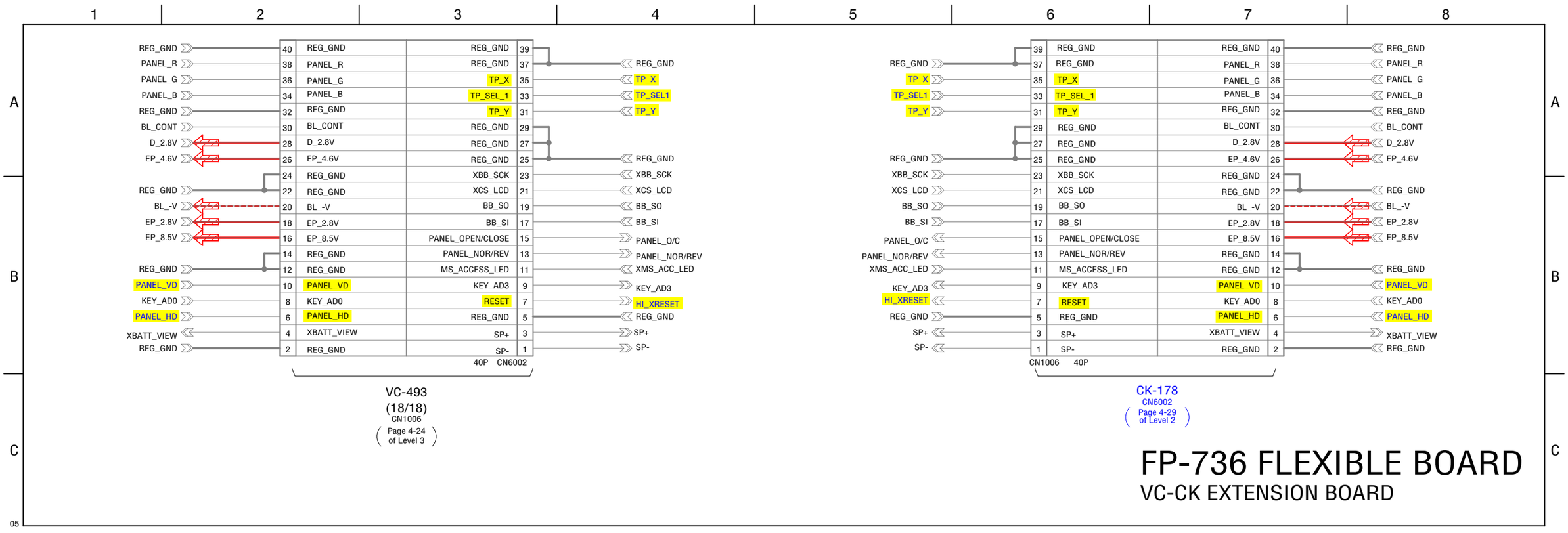
NO MARK:REC/PB MODE

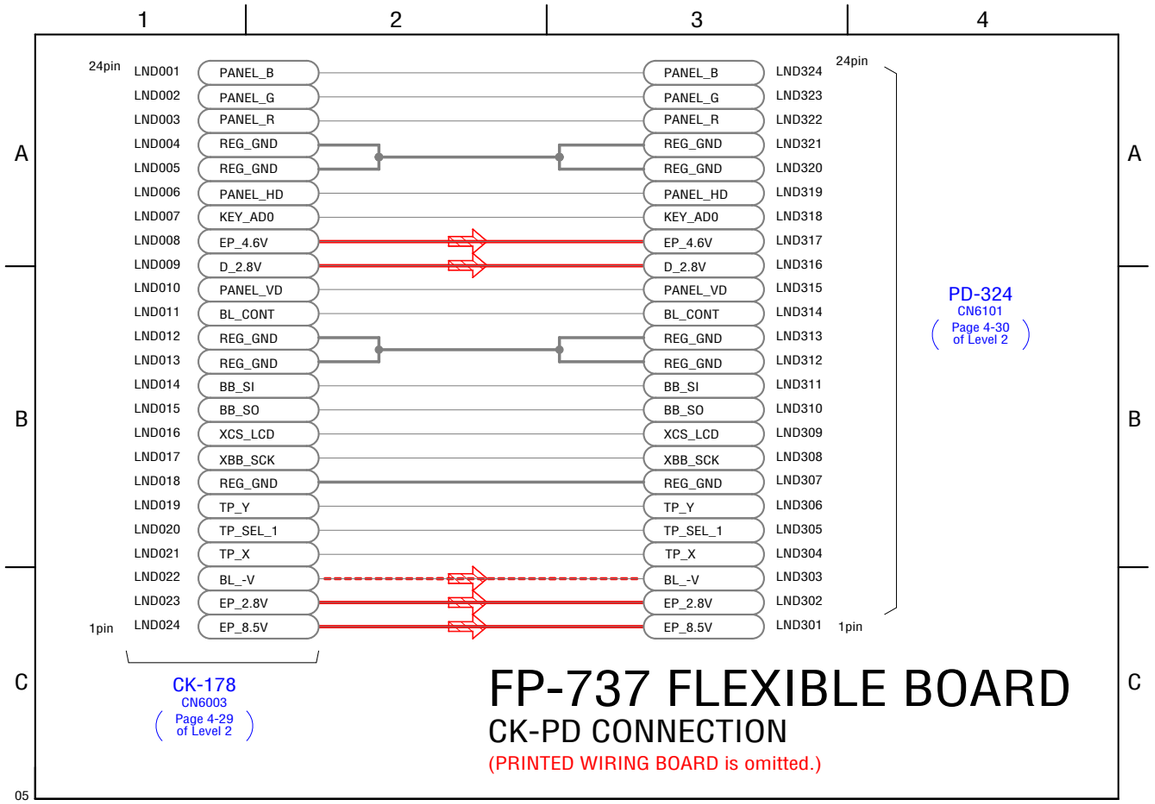
• Refer to page 4-2 (English), 4-3 (Japanese) for mark ⚠.

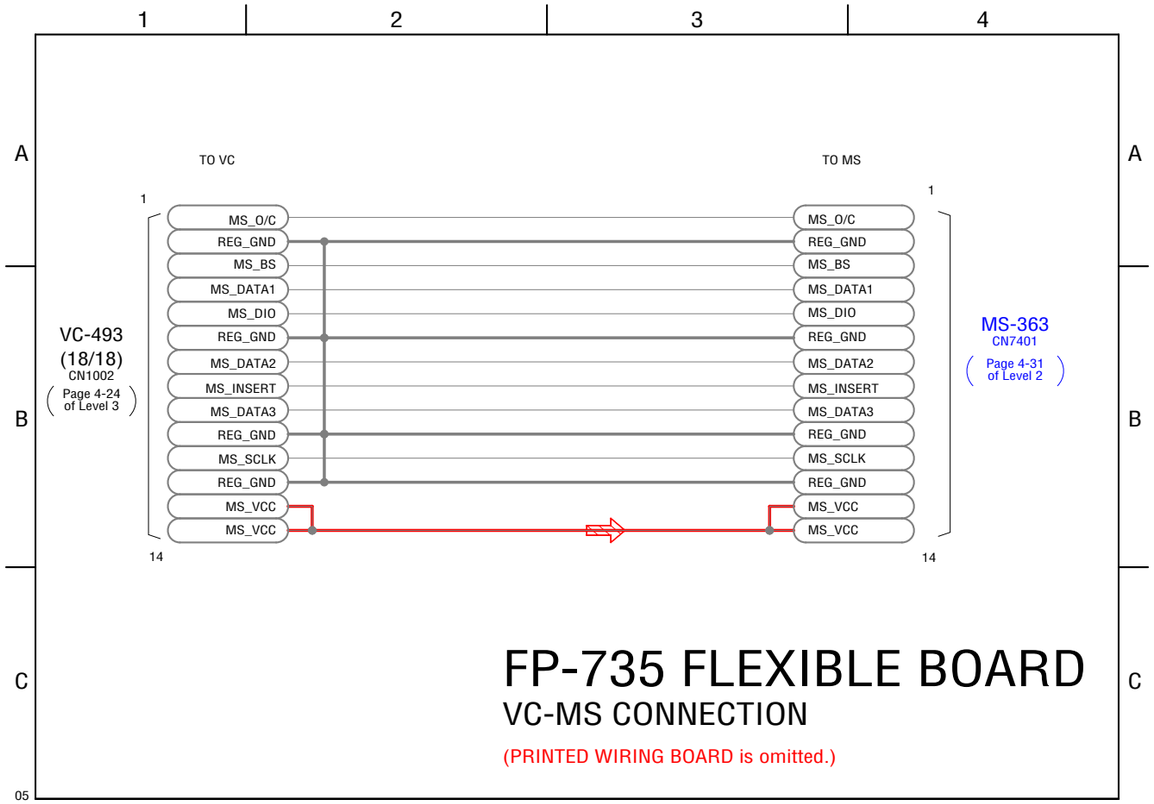


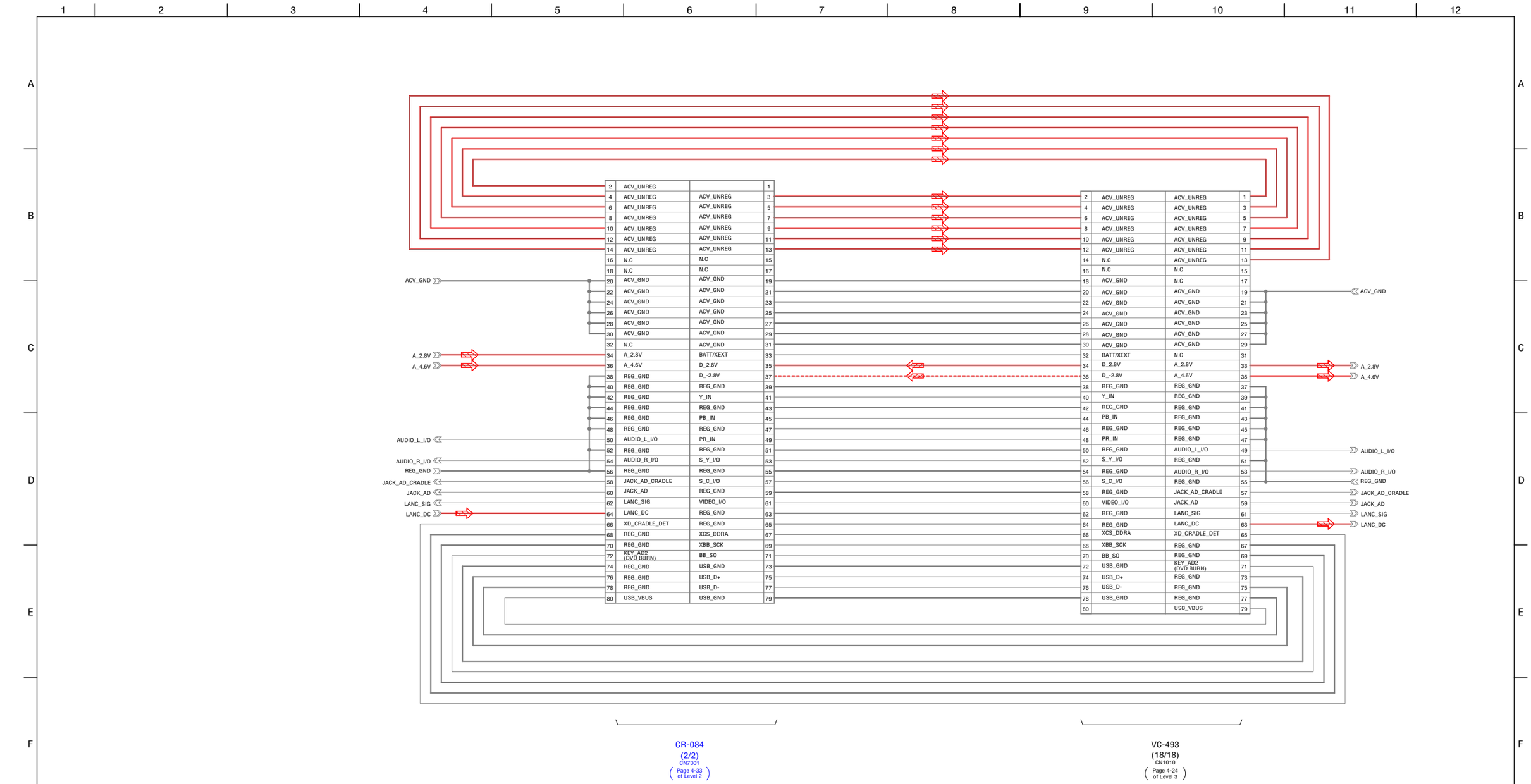





1
2
3
4
5
6
7
8
A
B
C
REG_GND 40 REG_GND REG_GND 39
PANEL_R 38 PANEL_R REG_GND 37
PANEL_G 36 PANEL_G TP_X 35
PANEL_B 34 PANEL_B TP_SEL_1 33
REG_GND 32 REG_GND TP_Y 31
BL_CONT 30 BL_CONT REG_GND 29
D_2.8V 28 D_2.8V REG_GND 27
EP_4.6V 26 EP_4.6V REG_GND 25
REG_GND 24 REG_GND XBB_SCK 23
REG_GND 22 REG_GND XCS_LCD 21
BL_-V 20 BL_-V BB_SO 19
EP_2.8V 18 EP_2.8V BB_SI 17
EP_8.5V 16 EP_8.5V PANEL_OPEN/CLOSE 15
14 REG_GND PANEL_NOR/REV 13
REG_GND 12 REG_GND MS_ACCESS_LED 11
PANEL_VD 10 PANEL_VD KEY_AD3 9
KEY_AD0 8 KEY_AD0 RESET 7
PANEL_HD 6 PANEL_HD REG_GND 5
XBATT_VIEW 4 XBATT_VIEW SP+ 3
REG_GND 2 REG_GND SP- 1
40P CN6002
REG_GND
TP_X
TP_SEL1
TP_Y
REG_GND
XBB_SCK
XCS_LCD
BB_SO
BB_SI
PANEL_O/C
PANEL_NOR/REV
XMS_ACC_LED
KEY_AD3
HI_XRESET
REG_GND
SP+
SP-
VC-493
(18/18)
CN1006
Page 4-24
of Level 3
REG_GND 39 REG_GND REG_GND 40
REG_GND 37 REG_GND PANEL_R 38
TP_X 35 TP_X PANEL_G 36
TP_SEL_1 33 TP_SEL_1 PANEL_B 34
TP_Y 31 TP_Y REG_GND 32
REG_GND 29 REG_GND BL_CONT 30
REG_GND 27 REG_GND D_2.8V 28
REG_GND 25 REG_GND EP_4.6V 26
XBB_SCK 23 XBB_SCK REG_GND 24
XCS_LCD 21 XCS_LCD REG_GND 22
BB_SO 19 BB_SO BL_-V 20
BB_SI 17 BB_SI EP_2.8V 18
PANEL_O/C 15 PANEL_OPEN/CLOSE EP_8.5V 16
PANEL_NOR/REV 13 PANEL_NOR/REV REG_GND 14
XMS_ACC_LED 11 MS_ACCESS_LED REG_GND 12
KEY_AD3 9 KEY_AD3 PANEL_VD 10
HI_XRESET 7 RESET KEY_AD0 8
REG_GND 5 REG_GND PANEL_HD 6
SP+ 3 SP+ XBATT_VIEW 4
SP- 1 SP- REG_GND 2
CN1006 40P
REG_GND
PANEL_R
PANEL_G
PANEL_B
REG_GND
BL_CONT
D_2.8V
EP_4.6V
REG_GND
BL_-V
EP_2.8V
EP_8.5V
REG_GND
PANEL_VD
KEY_AD0
PANEL_HD
XBATT_VIEW
REG_GND
CK-178
CN6002
Page 4-29
of Level 2
FP-736 FLEXIBLE BOARD
VC-CK EXTENSION BOARD
05


1
2
3
4
A
B
C
24pin
1pin
LND001 PANEL_B PANEL_B LND324
LND002 PANEL_G PANEL_G LND323
LND003 PANEL_R PANEL_R LND322
LND004 REG_GND REG_GND LND321
LND005 REG_GND REG_GND LND320
LND006 PANEL_HD PANEL_HD LND319
LND007 KEY_AD0 KEY_AD0 LND318
LND008 EP_4.6V EP_4.6V LND317
LND009 D_2.8V D_2.8V LND316
LND010 PANEL_VD PANEL_VD LND315
LND011 BL_CONT BL_CONT LND314
LND012 REG_GND REG_GND LND313
LND013 REG_GND REG_GND LND312
LND014 BB_SI BB_SI LND311
LND015 BB_SO BB_SO LND310
LND016 XCS_LCD XCS_LCD LND309
LND017 XBB_SCK XBB_SCK LND308
LND018 REG_GND REG_GND LND307
LND019 TP_Y TP_Y LND306
LND020 TP_SEL_1 TP_SEL_1 LND305
LND021 TP_X TP_X LND304
LND022 BL_-V BL_-V LND303
LND023 EP_2.8V EP_2.8V LND302
LND024 EP_8.5V EP_8.5V LND301
CK-178
CN6003
Page 4-29
of Level 2
PD-324
CN6101
Page 4-30
of Level 2
FP-737 FLEXIBLE BOARD
CK-PD CONNECTION
(PRINTED WIRING BOARD is omitted.)
05

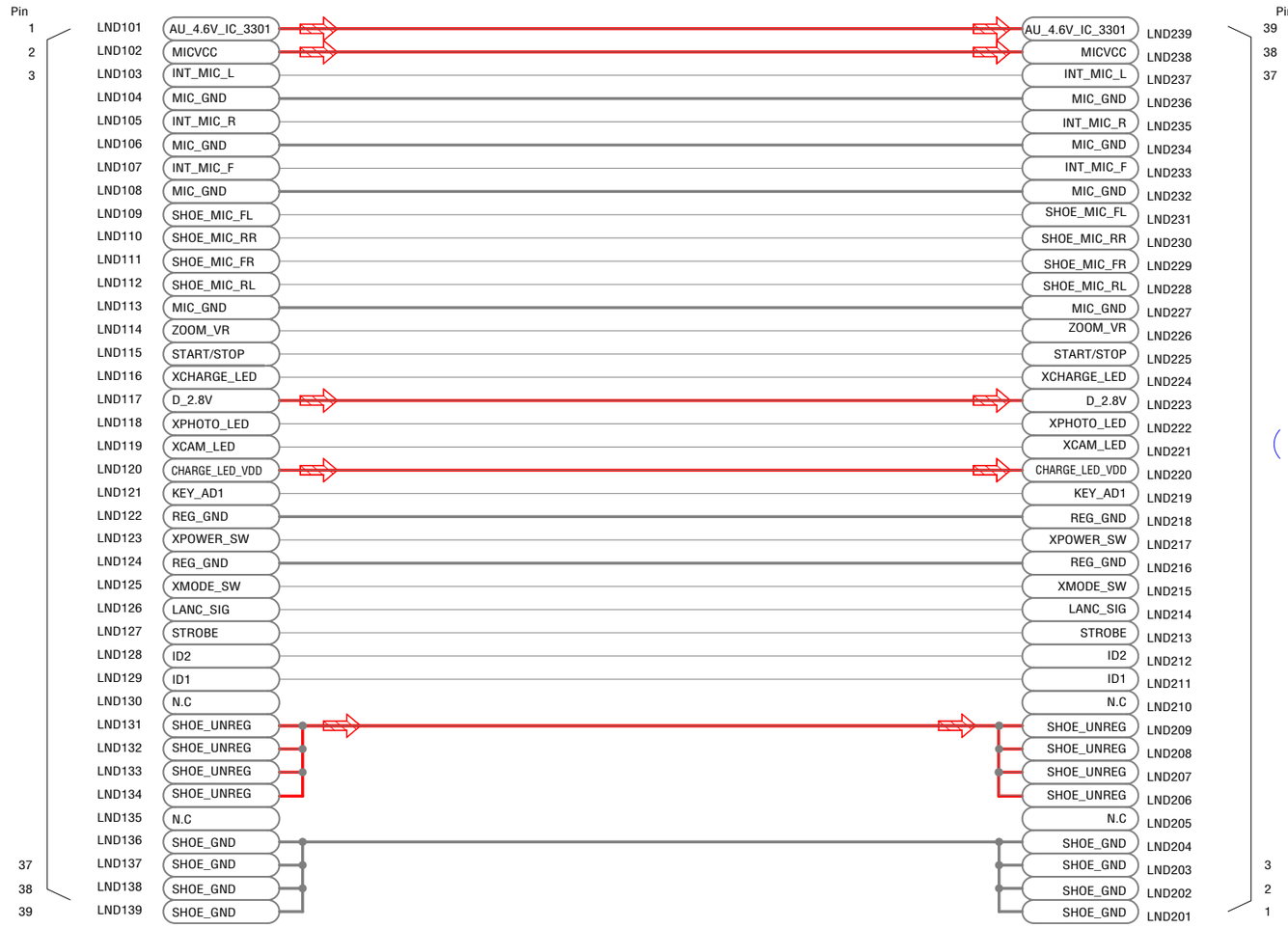

1
2
3
4
A
B
C
TO VC
TO MS
1
14
MS_O/C MS_O/C
REG_GND REG_GND
MS_BS MS_BS
MS_DATA1 MS_DATA1
MS_DIO MS_DIO
REG_GND REG_GND
MS_DATA2 MS_DATA2
MS_INSERT MS_INSERT
MS_DATA3 MS_DATA3
REG_GND REG_GND
MS_SCLK MS_SCLK
REG_GND REG_GND
MS_VCC MS_VCC
MS_VCC MS_VCC
VC-493
(18/18)
CN1002
Page 4-24
of Level 3
MS-363
CN7401
Page 4-31
of Level 2
FP-735 FLEXIBLE BOARD
VC-MS CONNECTION
(PRINTED WIRING BOARD is omitted.)
05



FP-743 FLEXIBLE BOARD

VC-CR CONNECTION

(PRINTED WIRING BOARD is omitted.)



VC-493
(18/18)
CN1007
Page 4-24
of Level 3

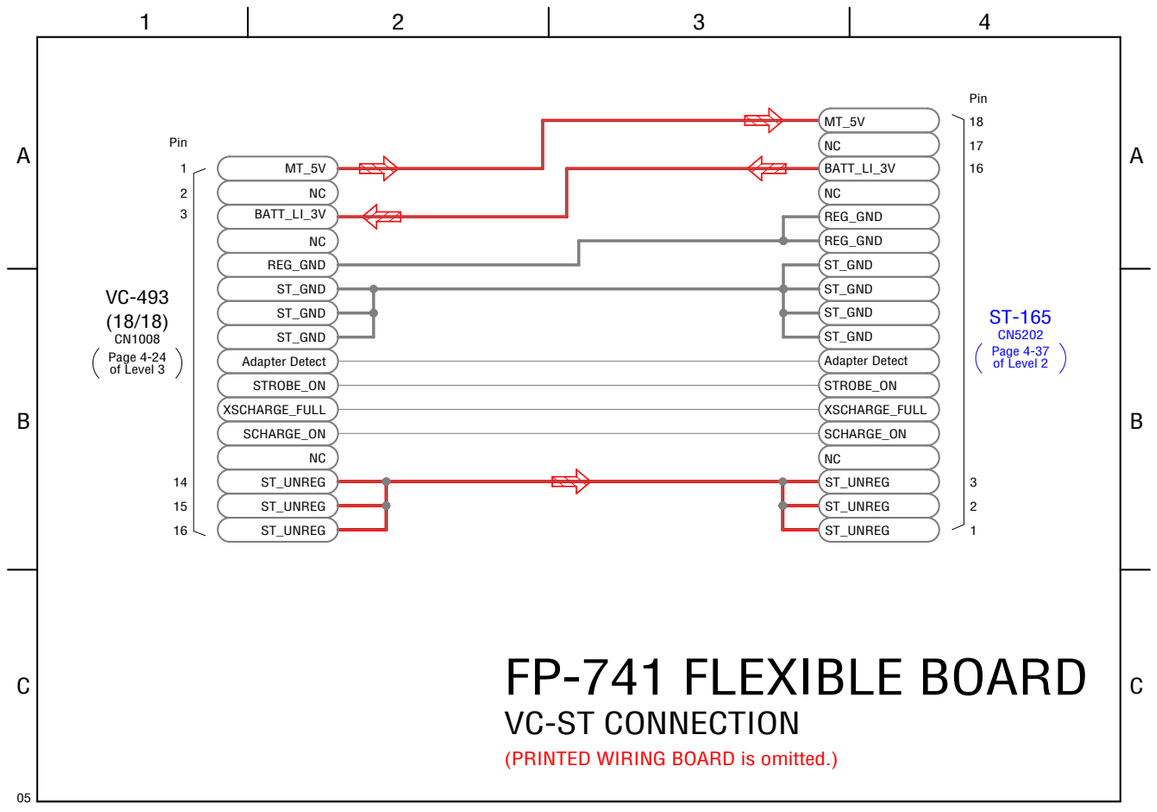
PH-002
CN7601
Page 4-35
of Level 2

FP-739 FLEXIBLE BOARD

VC-PH CONNECTION

(PRINTED WIRING BOARD is omitted.)

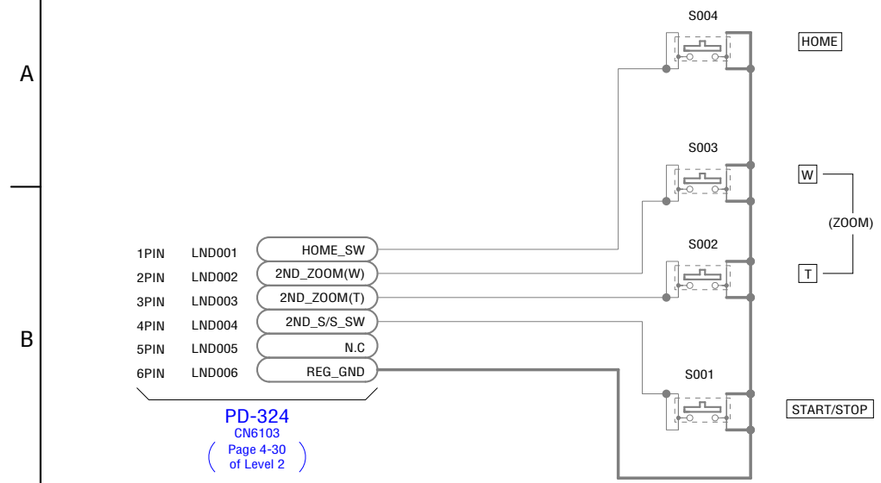
• Refer to page 4-2 (English), 4-3 (Japanese) for mark ⚠.



FP-741 FLEXIBLE BOARD

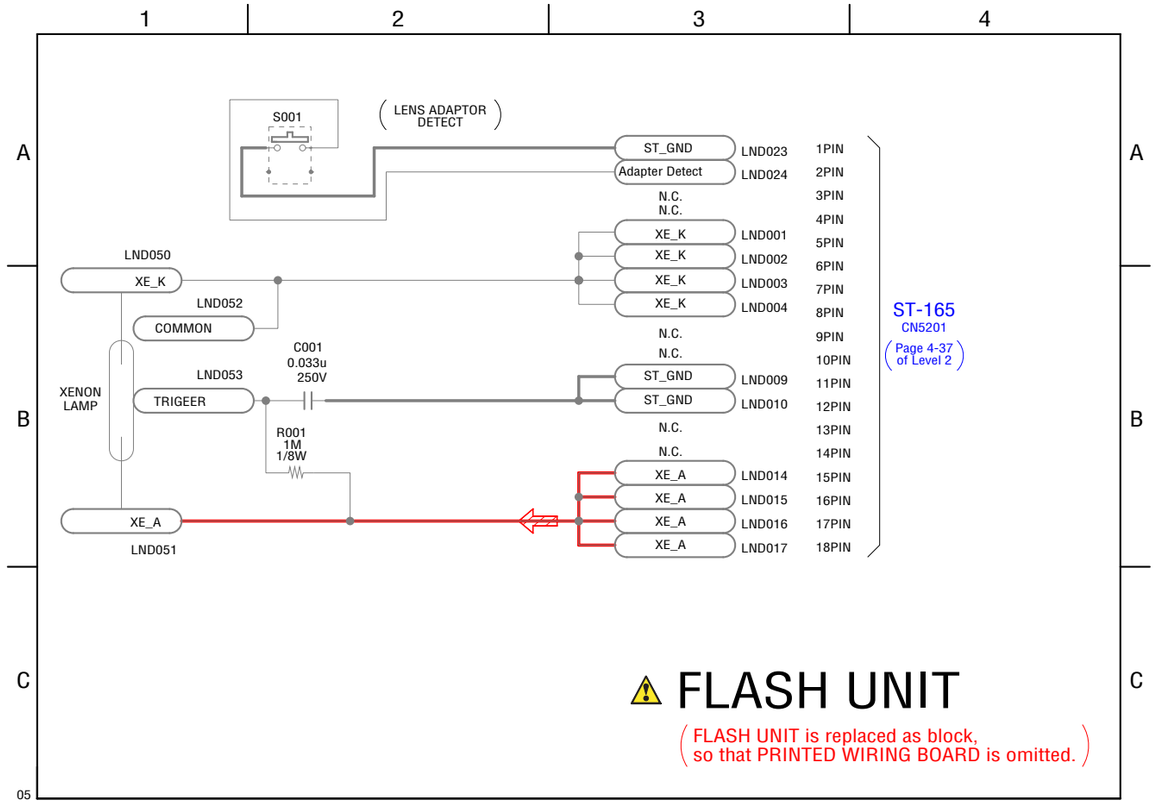
VC-ST CONNECTION

(PRINTED WIRING BOARD is omitted.)



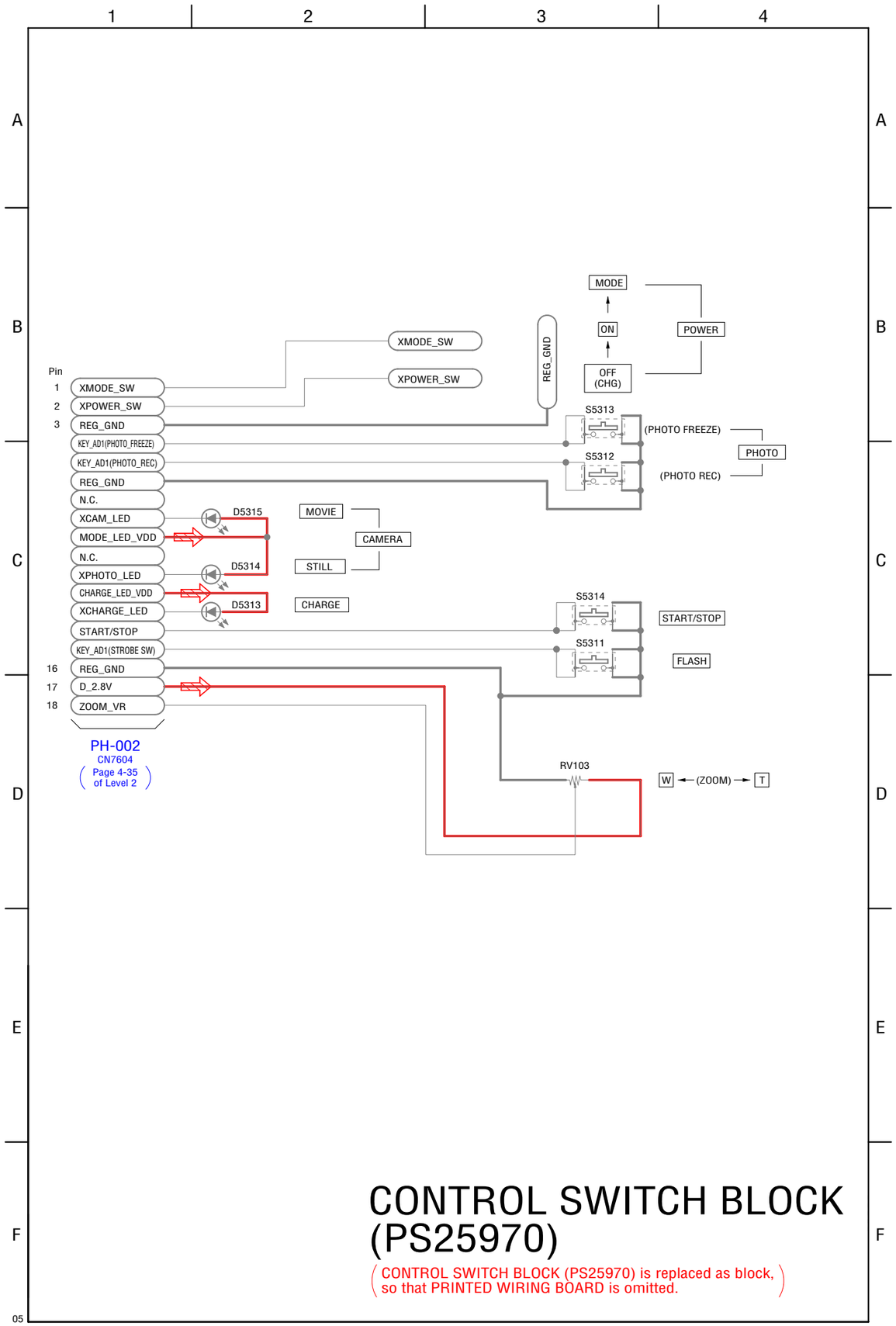
CONTROL SWITCH BLOCK (SB25970)

(CONTROL SWITCH BLOCK (SB25970) is replaced as block, so that PRINTED WIRING BOARD is omitted.)



⚠ FLASH UNIT

(FLASH UNIT is replaced as block, so that PRINTED WIRING BOARD is omitted.)


1
2
3
4
A
B
C
D
E
F
05
Pin
1 XMODE_SW
2 XPOWER_SW
3 REG_GND
KEY_AD1(PHOTO_FREEZE)
KEY_AD1(PHOTO_REC)
REG_GND
N.C.
XCAM_LED
MODE_LED_VDD
N.C.
XPHOTO_LED
CHARGE_LED_VDD
XCHARGE_LED
START/STOP
KEY_AD1(STROBE SW)
16 REG_GND
17 D_2.8V
18 ZOOM_VR
PH-002
CN7604
Page 4-35 of Level 2
XMODE_SW
XPOWER_SW
REG_GND
MODE
ON
OFF (CHG)
POWER
S5313
(PHOTO FREEZE)
S5312
(PHOTO REC)
PHOTO
D5315
MOVIE
CAMERA
D5314
STILL
D5313
CHARGE
S5314
START/STOP
S5311
FLASH
RV103
W ← (ZOOM) → T
CONTROL SWITCH BLOCK
(PS25970)
CONTROL SWITCH BLOCK (PS25970) is replaced as block,
so that PRINTED WIRING BOARD is omitted.

4-3. PRINTED WIRING BOARDS

Link

- CK-178 BOARD (SIDE A)
- CK-178 BOARD (SIDE B)
- PD-324 BOARD (SIDE A)
- PD-324 BOARD (SIDE B)
- FP-744 FLEXIBLE BOARD
- MS-363 BOARD
- CR-084 BOARD
- FP-738 FLEXIBLE BOARD
- FP-745 FLEXIBLE BOARD
- PH-002 BOARD
- FP-734 FLEXIBLE BOARD
- ST-165 BOARD
- FP-731 FLEXIBLE BOARD
- FP-733 FLEXIBLE BOARD
- FP-736 FLEXIBLE BOARD

- COMMON NOTE FOR PRINTED WIRING BOARDS

4-3. PRINTED WIRING BOARDS

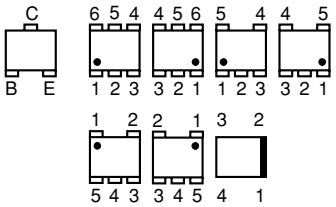
(ENGLISH)

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS

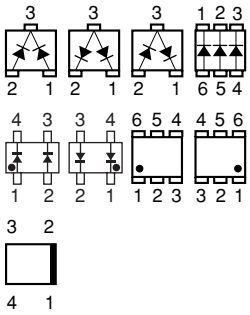
- : Uses unleaded solder.
- : Circuit board
  : Flexible board
  Pattern from the side which enables seeing.
  : pattern of the rear side
  (The other layers' patterns are not indicated)
- Through hole is omitted.
- There are a few cases that the part printed on diagram isn't mounted in this model.
- : panel designation

- Chip parts.

Transistor



Diode



(JAPANESE)

プリント図共通ノート
【プリント図ノート】

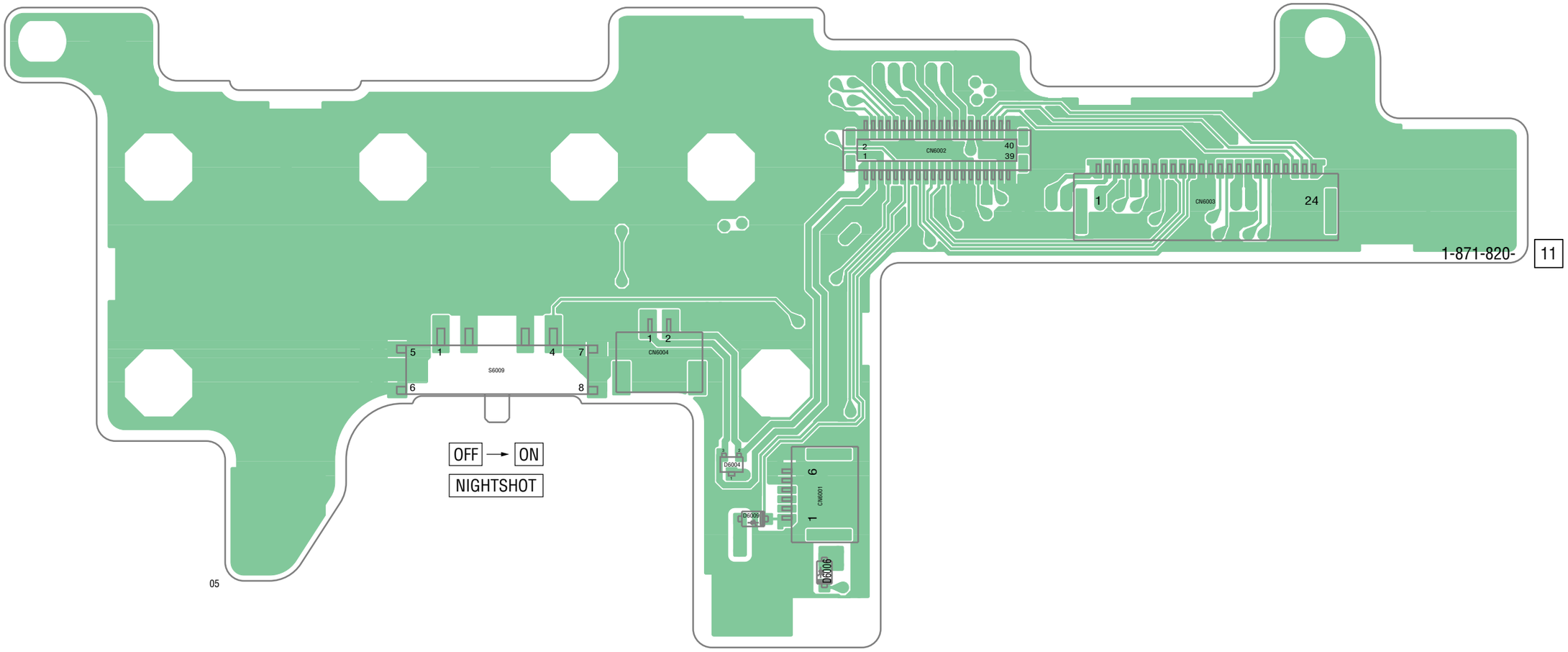
- ：無鉛半田を使用しています。
- ：基板
  ：フレキシブル配線板
  見ている面側のパターン。
  ：裏側のパターン
  （他のパターンについては表示されていません）
- スルーホールは省略。
- プリント図には，本機で使用していない部品が記載されている場合があります。
- はパネル表示名称。

Printed wiring boards of the CM-077, VC-493 and LD-222 boards are not shown.
Pages from 4-45 to 4-48 are not shown.

CK-178 (4 layers)

: Uses unleaded solder.

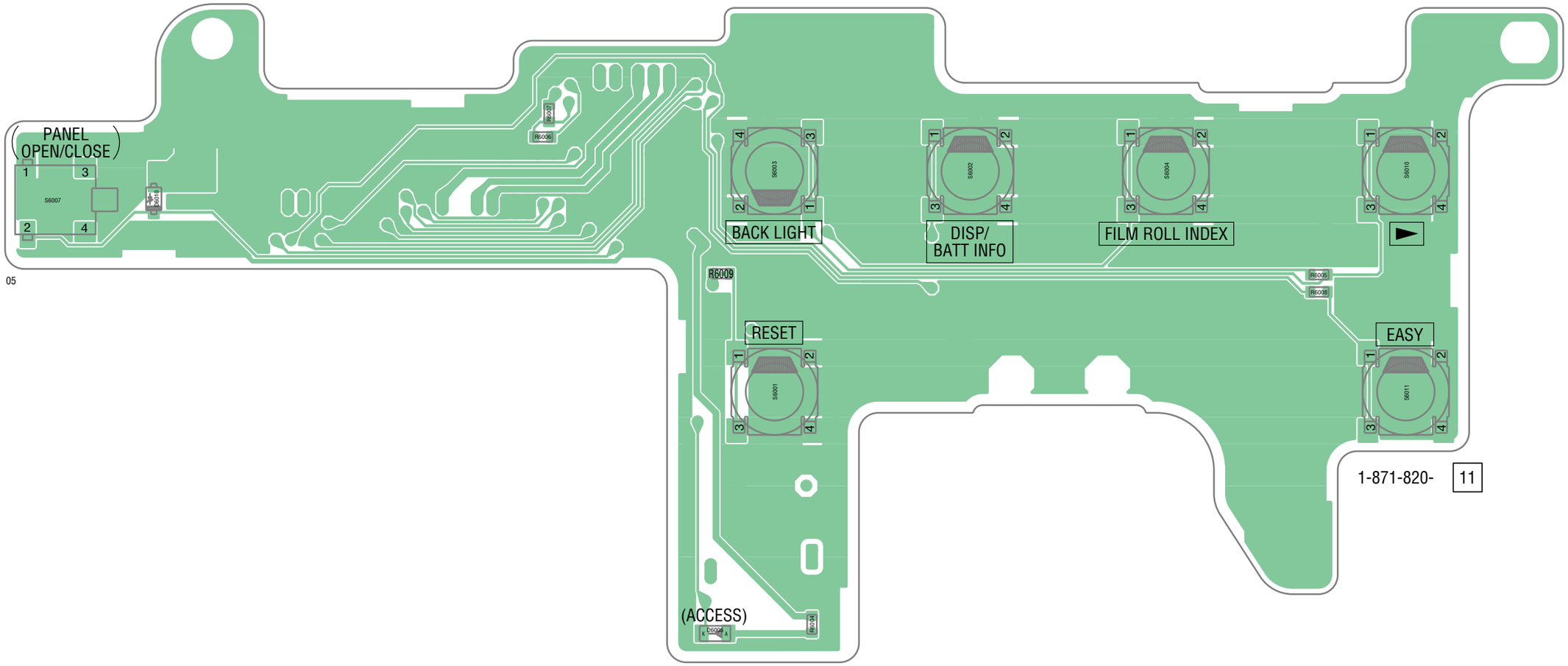
CK-178 BOARD (SIDE A)



CK-178 (4 layers)

: Uses unleaded solder.

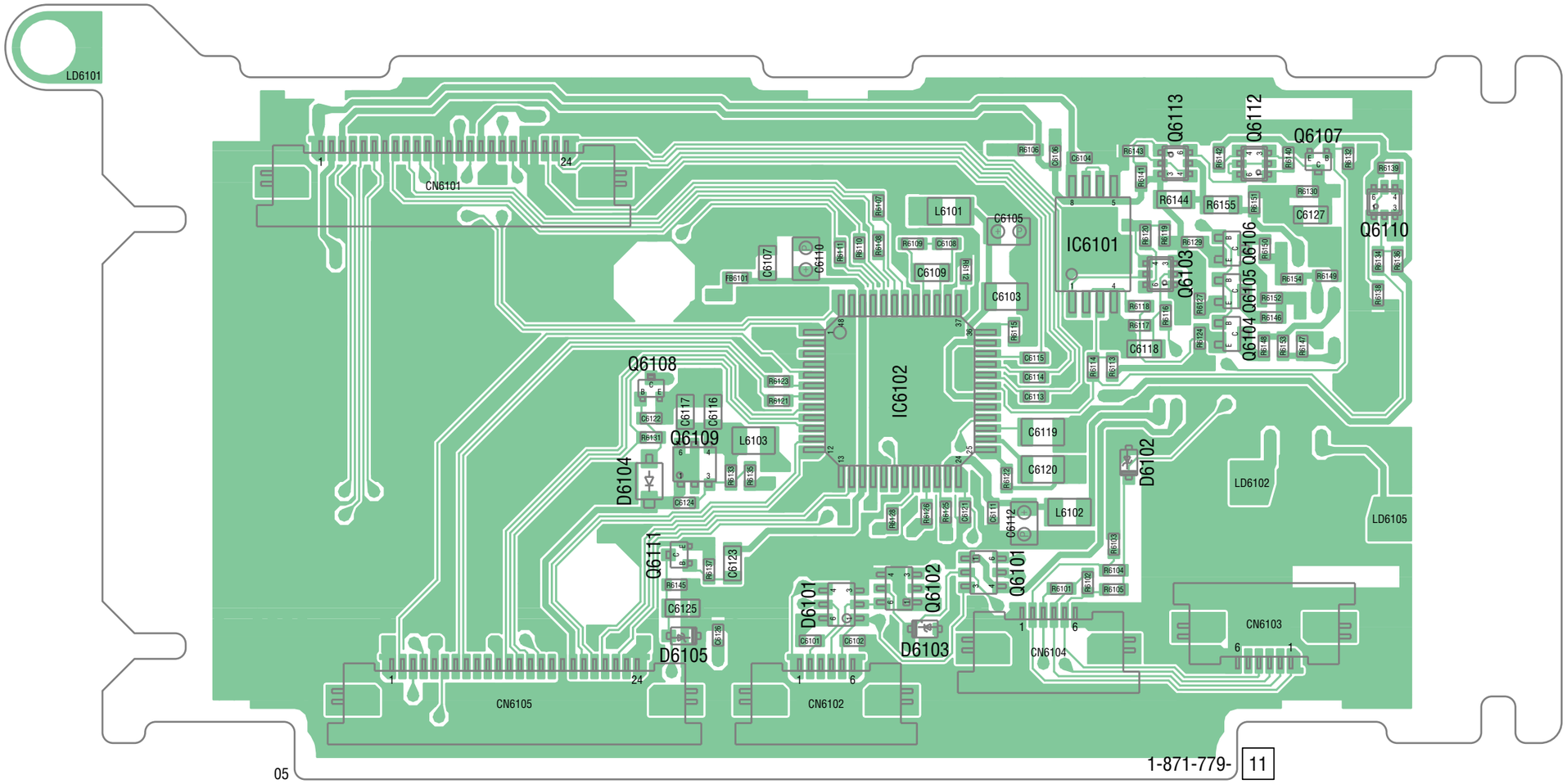
CK-178 BOARD (SIDE B)



PD-324 (2 layers)

: Uses unleaded solder.

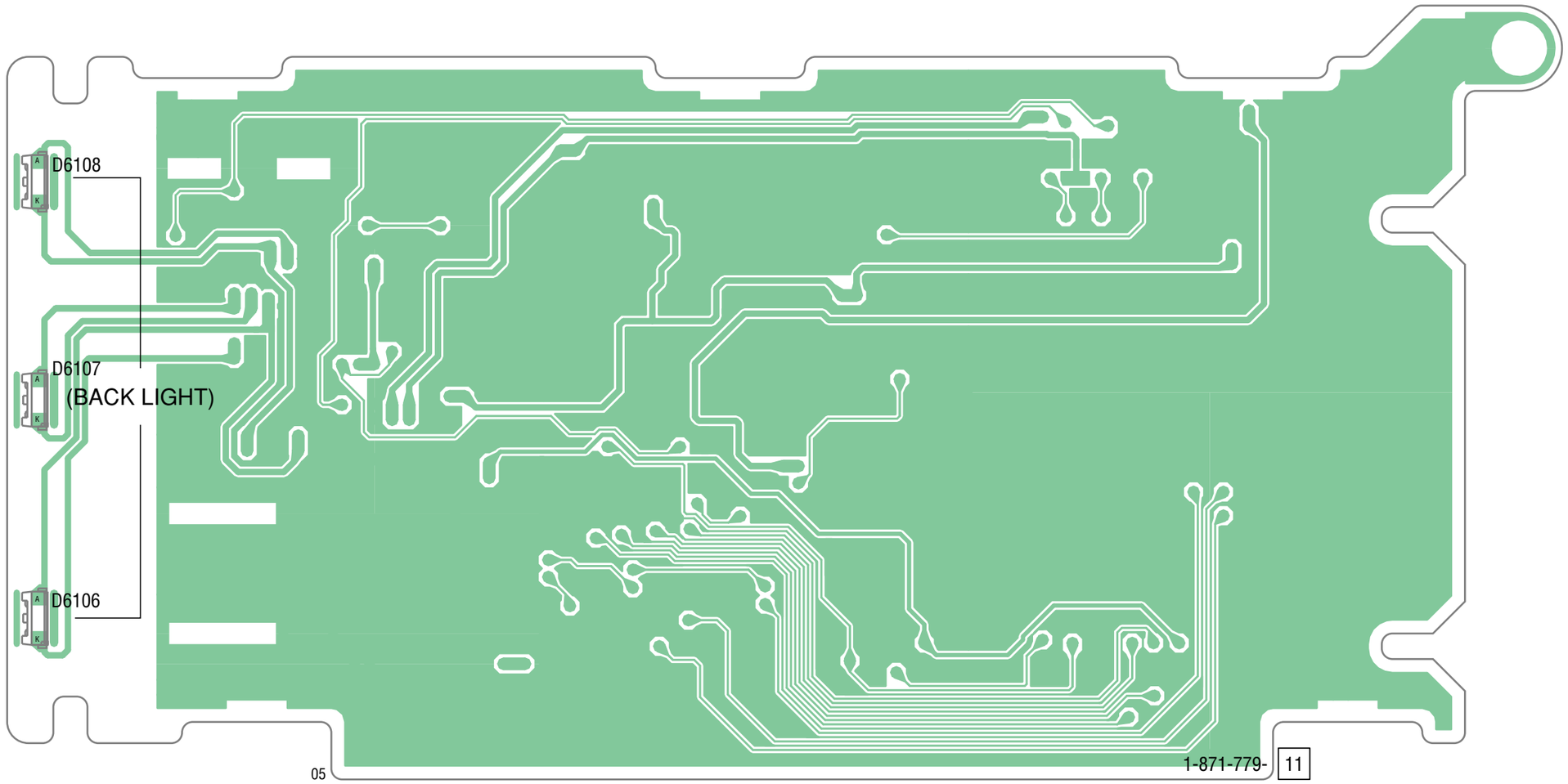
PD-324 BOARD (SIDE A)



PD-324 (2 layers)

: Uses unleaded solder.

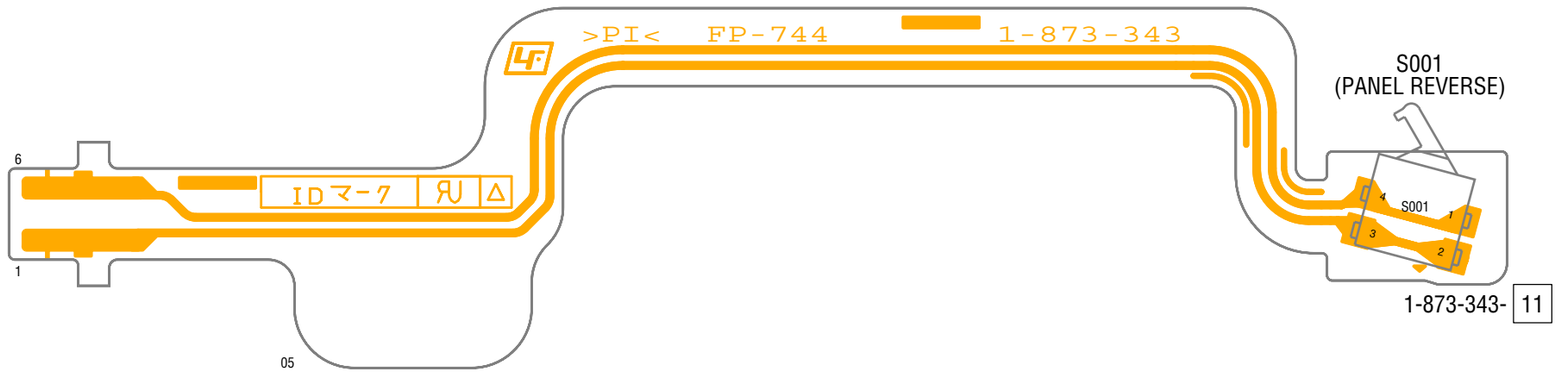
PD-324 BOARD (SIDE B)



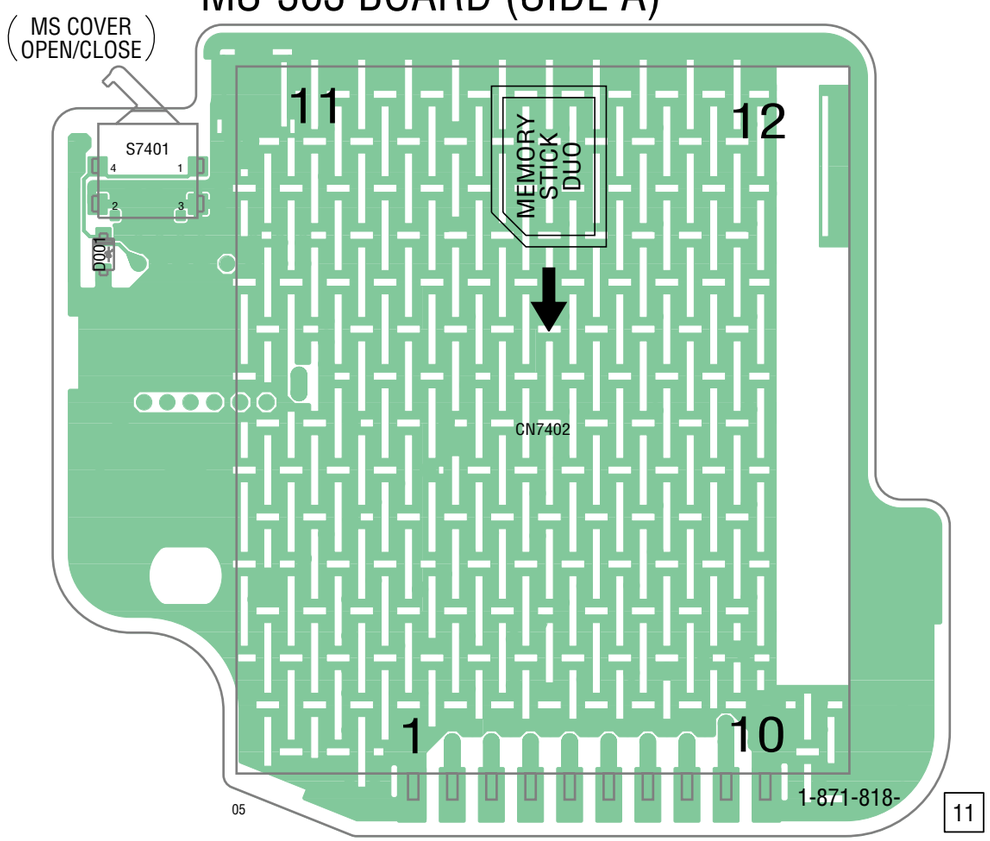
FP-744 (1 layer), MS-363 (4 layers)

: Uses unleaded solder.

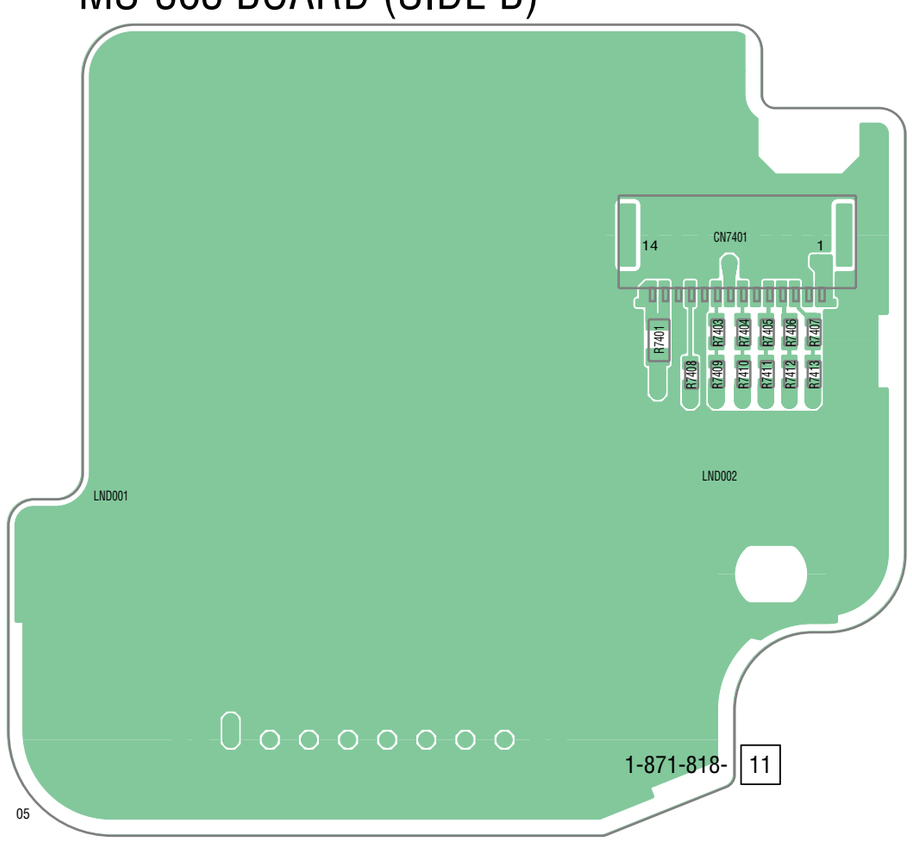
FP-744 FLEXIBLE BOARD



MS-363 BOARD (SIDE A)



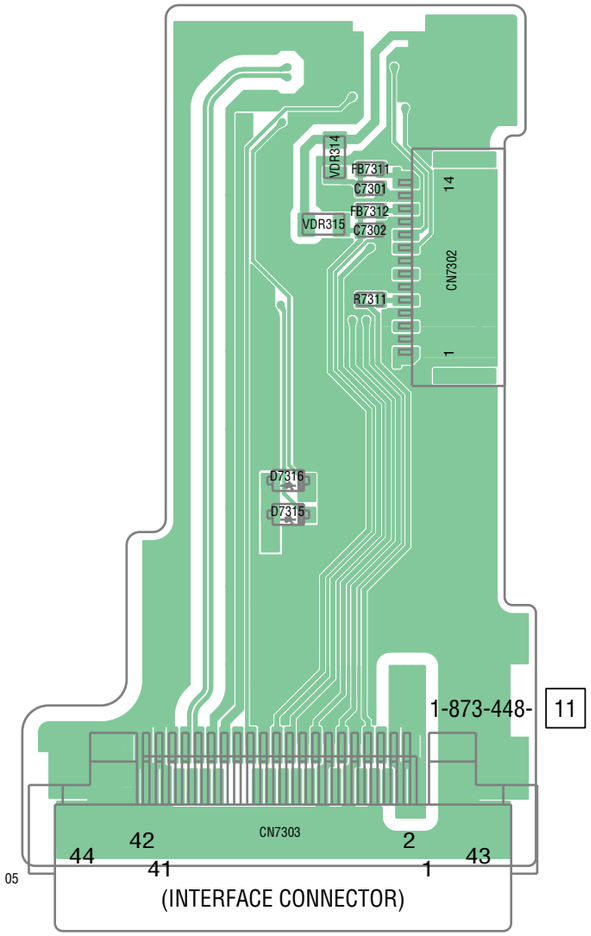
MS-363 BOARD (SIDE B)



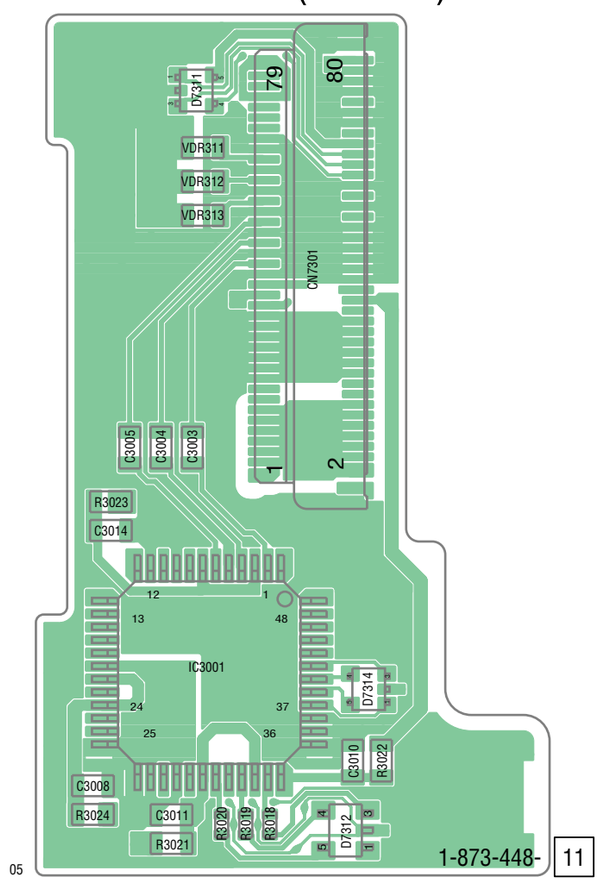
CR-084 (6 layers), FP-738 (1 layer), FP-745 (2 layers)

: Uses unleaded solder.

CR-084 BOARD (SIDE A)

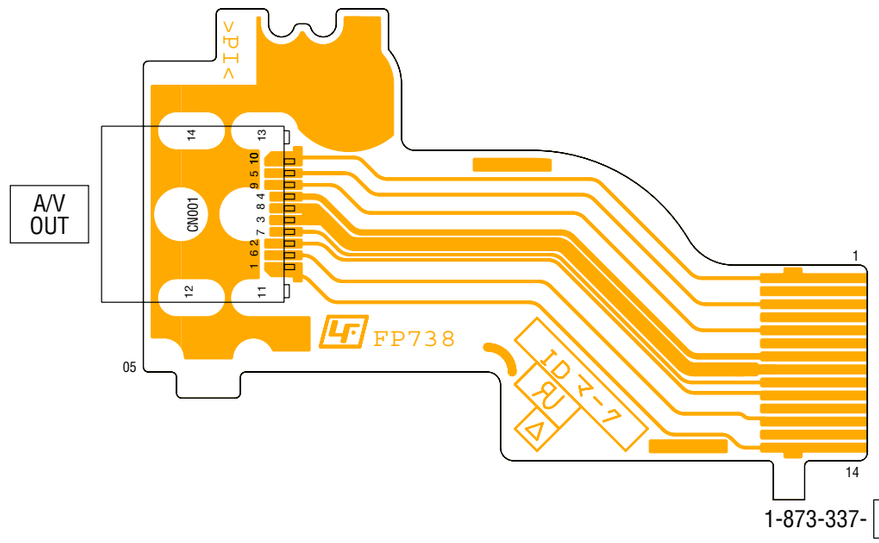


CR-084 BOARD (SIDE B)

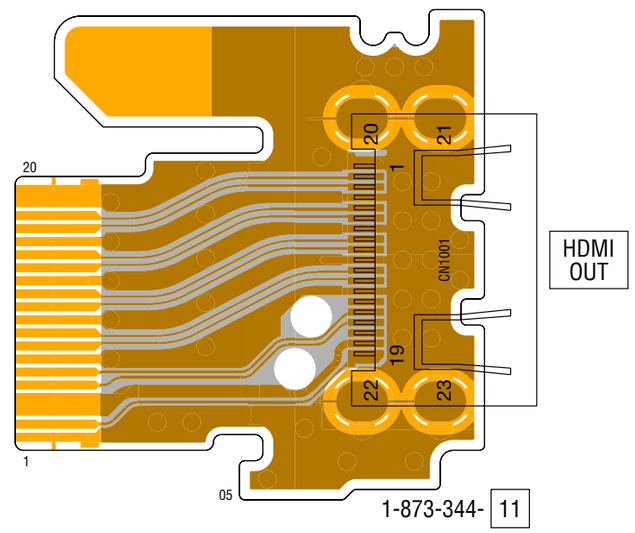


Note: CN7303 (interface connector) is not supplied, but this is included in CR-084 complete board.

FP-738 FLEXIBLE BOARD



FP-745 FLEXIBLE BOARD

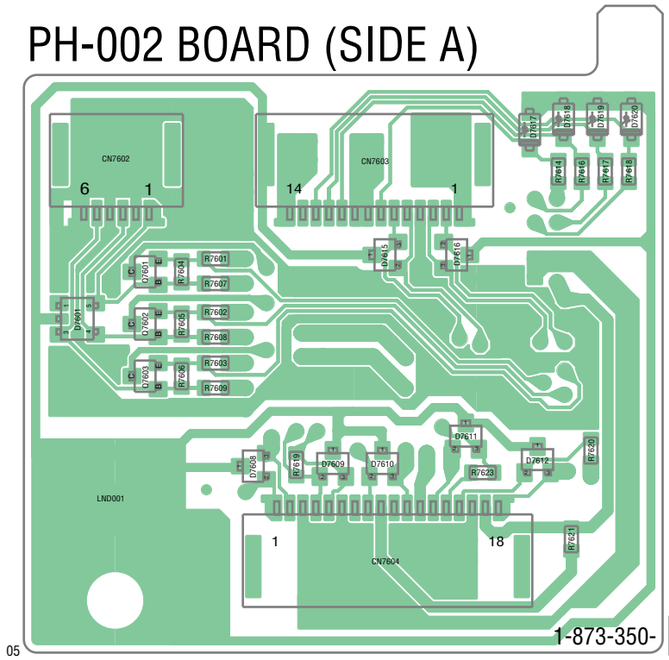


Note: CN1001 is not supplied, but this is included in FP-745 flexible complete board.

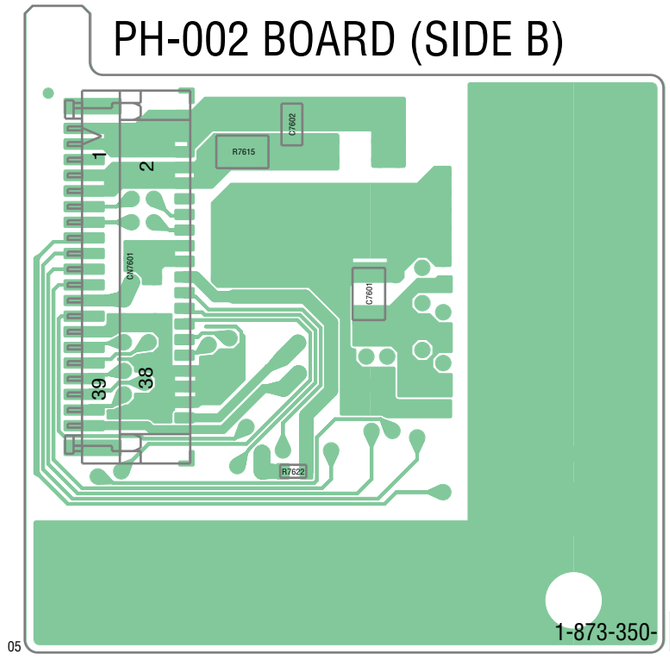
PH-002 (4 layers), FP-734 (1 layer)

: Uses unleaded solder.

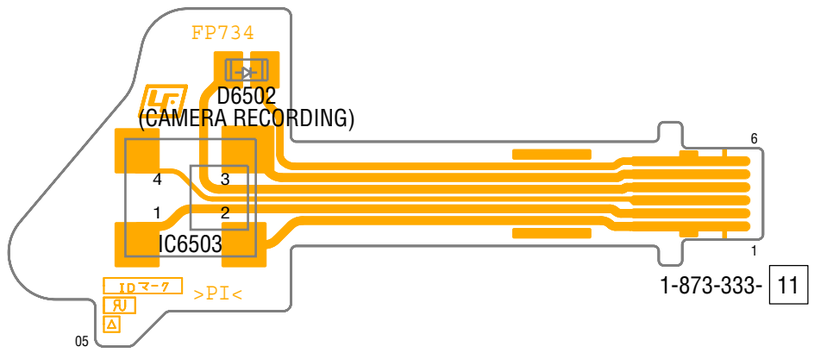
PH-002 BOARD (SIDE A)



PH-002 BOARD (SIDE B)



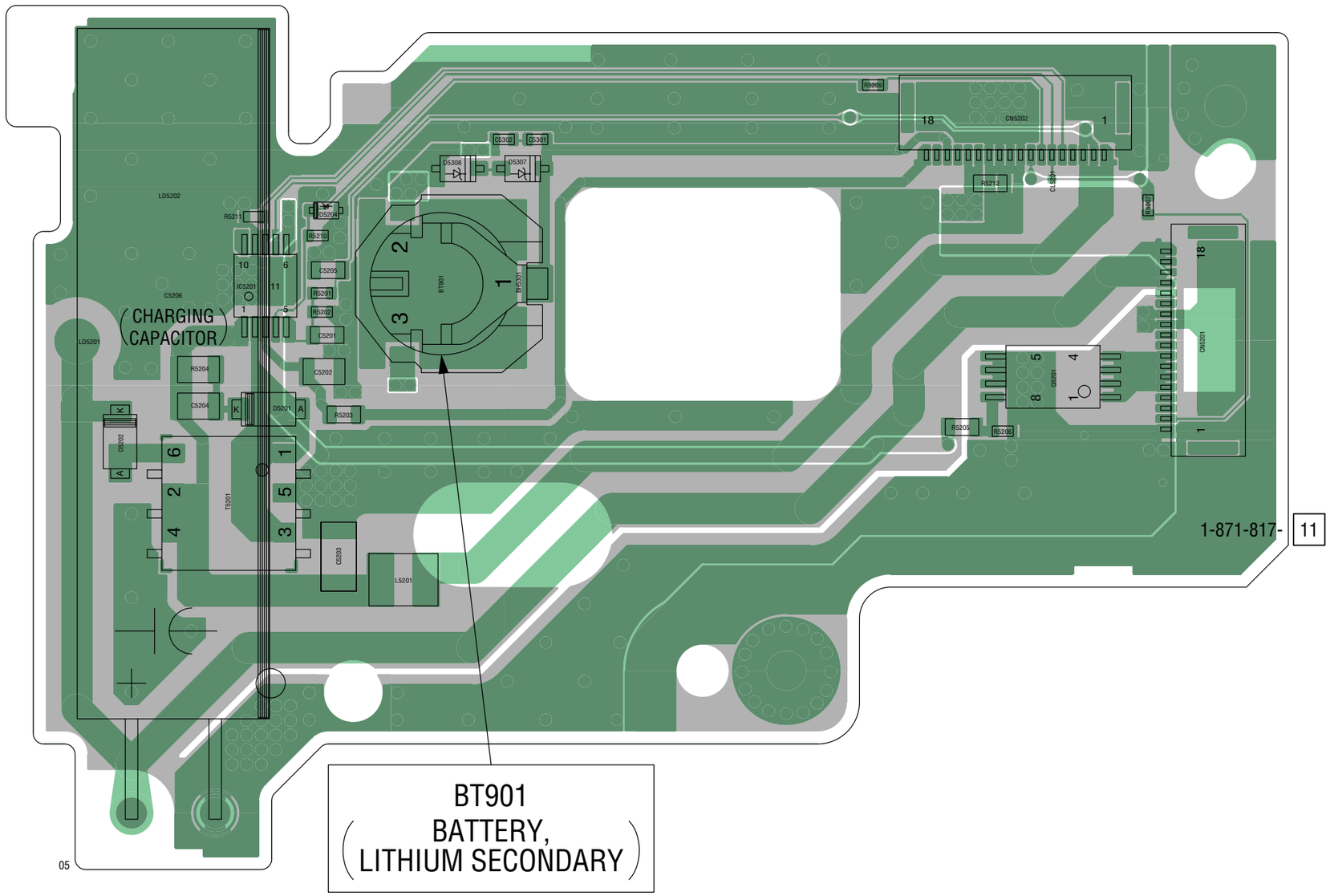
FP-734 FLEXIBLE BOARD



ST-165 (4 layers)

: Uses unleaded solder.

ST-165 BOARD



BT901
BATTERY,
LITHIUM SECONDARY

Note: BT901 (lithium battery) is not included in ST-165 complete board.

Note: Replace the battery holder (BH5301) together when replacing the lithium battery (BT901) on the ST-165 board. (The battery holder removed once cannot be used again.)
When mounting these parts, mount new battery holder first and attach new lithium battery next.

Note: ST-165基板のリチウム電池（BT901）を交換する場合はバッテリホルダ（BH5301）も同時に新品に交換して下さい。（一度使用したバッテリホルダは再使用できません。）
部品取り付けの際は，先にバッテリホルダを取り付けてからリチウム電池を装着して下さい。

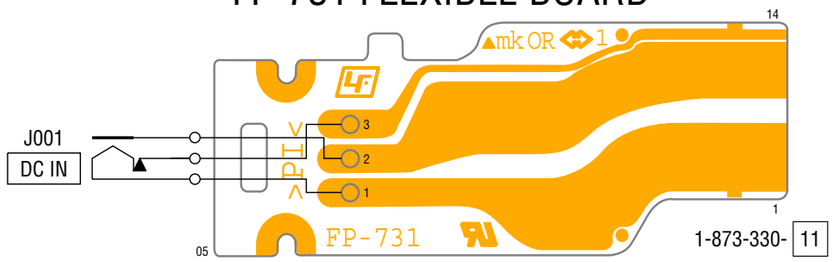
CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

注意
電池の交換は，正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

FP-731 (1 layer), FP-733 (2 layers), FP-736 (2 layers)

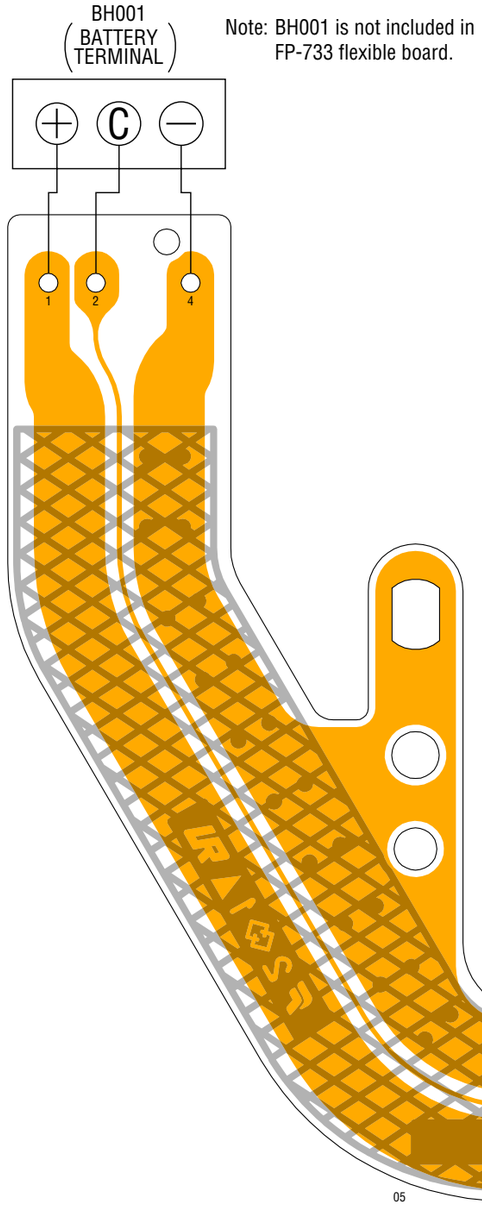
: Uses unleaded solder.

FP-731 FLEXIBLE BOARD



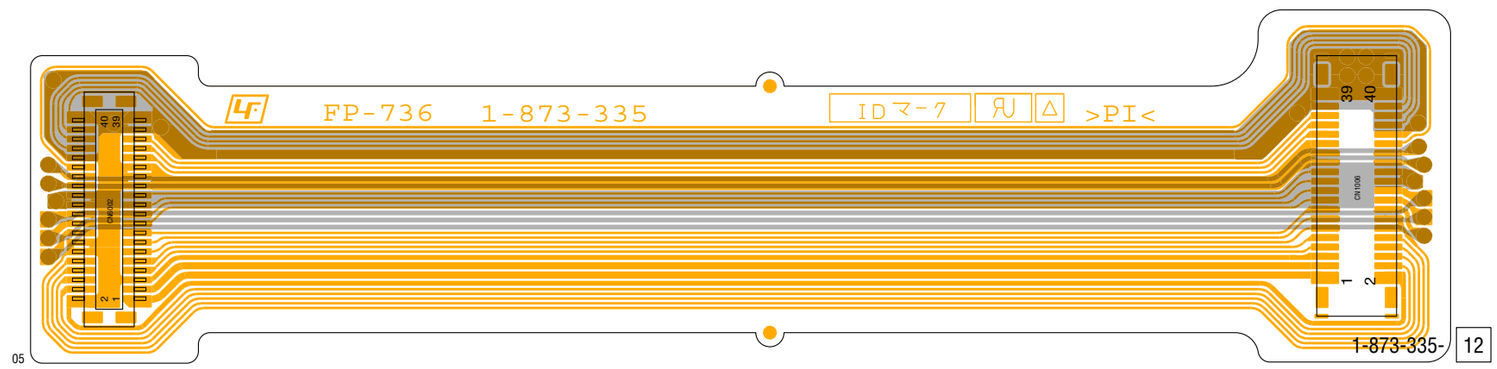
Note: J001 is not included in FP-731 flexible board.

FP-733 FLEXIBLE BOARD



Note: BH001 is not included in FP-733 flexible board.

FP-736 FLEXIBLE BOARD



NOTE

5. REPAIR PARTS LIST

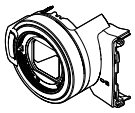
NOTE: Characters A to Z of the electrical parts list indicate location of exploded views in which the desired part is shown.

Link

EXPLODED VIEWS

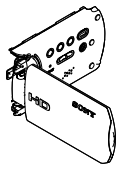
A

OVERALL SECTION



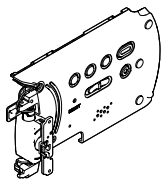
B

FRONT PANEL SECTION



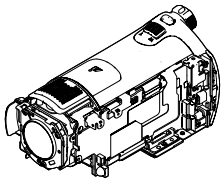
C

LCD PANEL SECTION



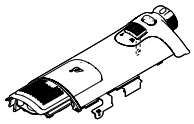
D

CABINET R SECTION



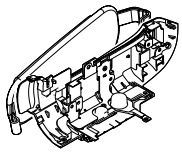
E

MAIN BODY SECTION



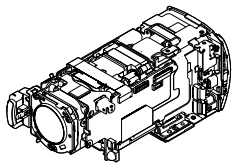
F

TOP CABINET SECTION



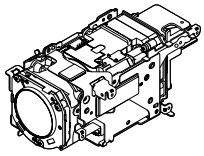
G

CABINET L SECTION



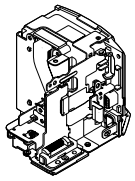
H

LENS/BT SECTION



I

LENS SECTION



J

BT PANEL SECTION

Link

ELECTRICAL PARTS LIST

ACCESSORIES

CK-178 BOARD D	FP-736 FLEXIBLE BOARD D	PD-324 BOARD C
CR-084 BOARD J	FP-738 FLEXIBLE BOARD J	PH-002 BOARD F
FP-731 FLEXIBLE BOARD H	FP-744 FLEXIBLE BOARD D	ST-165 BOARD H
FP-733 FLEXIBLE BOARD J	FP-745 FLEXIBLE BOARD H	
FP-734 FLEXIBLE BOARD B	MS-363 BOARD E	

5. REPAIR PARTS LIST

(ENGLISH)

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- CAPACITORS:
  uF: µF
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- Color Indication of Appearance Parts
  Example:
  (SILVER) : Cabinet's Color
  (Silver) : Parts Color

(JAPANESE)

【使用上の注意】

- ここに記載されている部品は, 補修用部品であるため, 回路図及びセットに付いている部品と異なる場合があります。
- -XX, -Xは標準化部品のため, セットに付いている部品と異なる場合があります。
- *印の部品は常備在庫しておりません。
- コンデンサの単位でuFは µFを示します。
- 抵抗の単位Ωは省略してあります。
  金　　被：金属被膜抵抗。
  サンキン：酸化金属被膜抵抗。
- インダクタの単位でuHは µHを示します。
- 半導体の名称でuA..., uPA..., uPB..., uPC..., uPD...等はそれぞれ µA..., µPA..., µPB..., µPC..., µPD...を示します。

お願い
図面番号で部品を指定するときは基板名又はブロックを併せて指定してください。

⚠印の部品，または⚠印付の点線で囲まれた部品は，安全性を維持するために，重要な部品です。
従って交換時は，必ず指定の部品を使用してください。

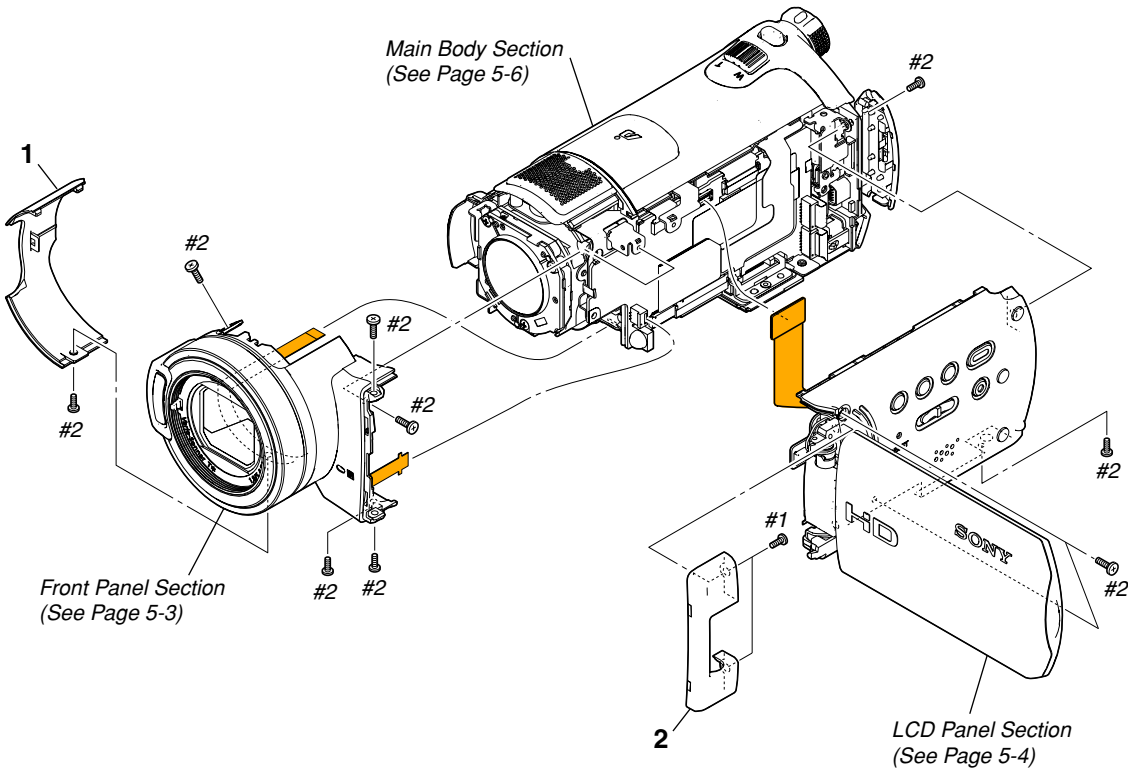
- 外装部品色表示
  例：
  (SILVER):セットの色を表す。
  (Silver) : 部品の色を表す。

- Abbreviation
  AR : Argentine model
  AUS : Australian model
  BR : Brazilian model
  CH : Chinese model
  CND : Canadian model
  EE : East European model
  HK : Hong Kong model
  J : Japanese model
  JE : Tourist model
  KR : Korea model
  NE : North European model

DISASSEMBLY HARDWARE LIST

5-1. EXPLODED VIEWS

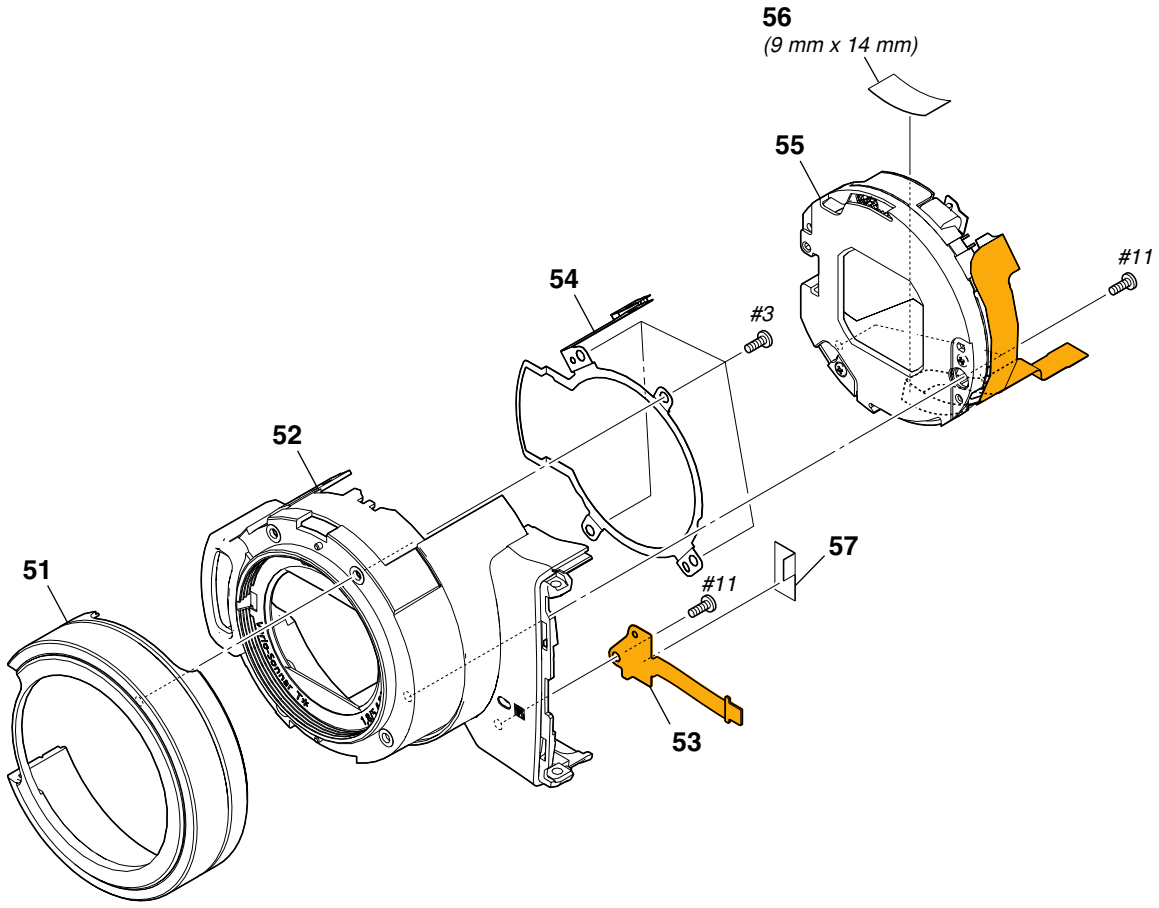
5-1-1. OVERALL SECTION



Ref. No.	Part No.	Description
1	3-215-117-01	PLATE, L ORNAMENTAL
2	3-215-111-01	COVER, HC

Ref. No.	Part No.	Description
#1	2-635-562-11	SCREW (M1.7) (Black)
#2	2-635-562-31	SCREW (M1.7) (Black)

5-1-2. FRONT PANEL SECTION



CAUTION:
For the part of 56, cut WOVEN (T0.25), FABRIC NON (3-076-631-01) into the desired length and use it.

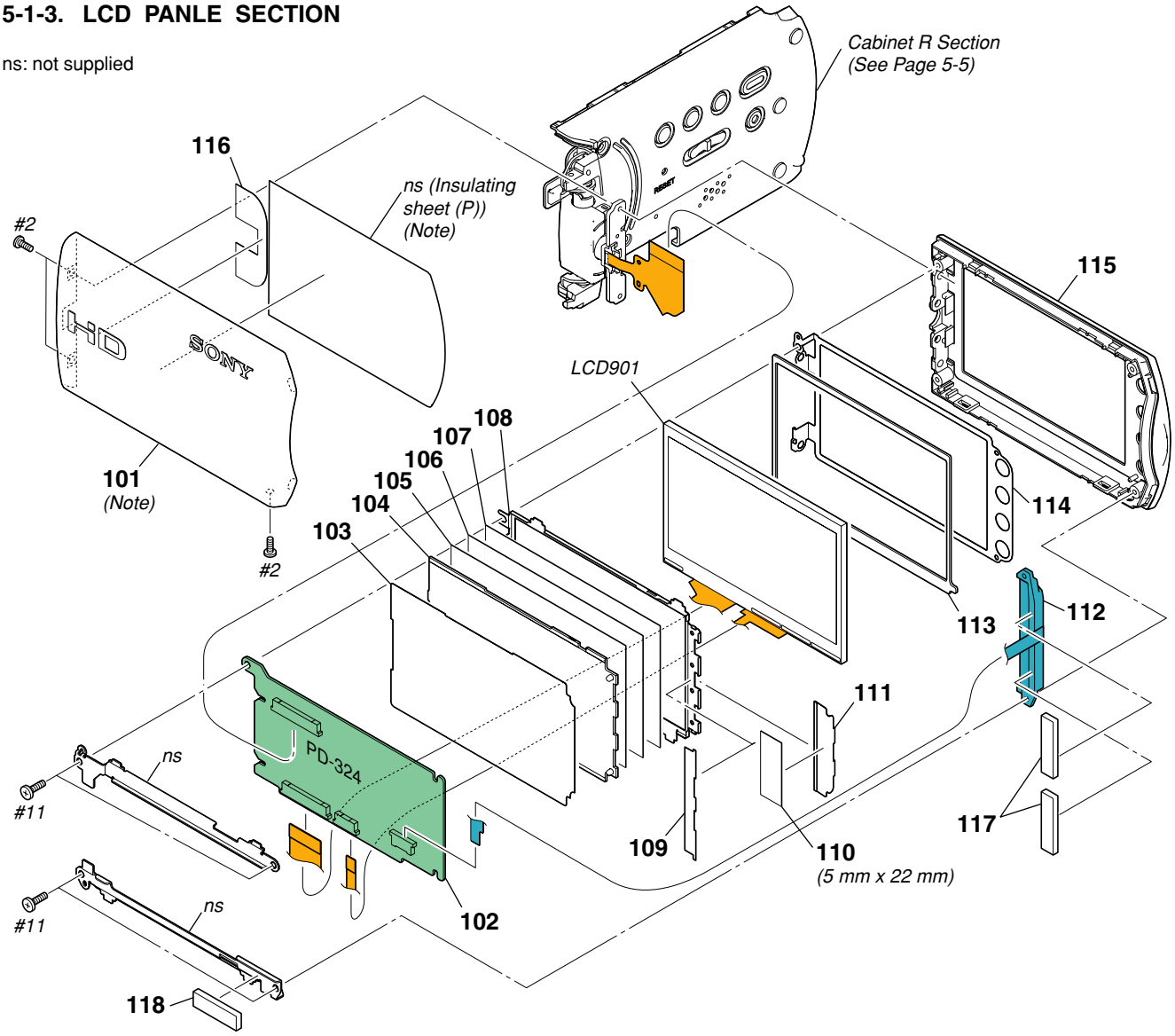
CAUTION:
56番は，T0.25ヒメロン（3-076-631-01）を切って使用。

Ref. No.	Part No.	Description
51	3-215-068-01	RING, F
52	X-2178-953-1	PANEL ASSY, F
53	A-1283-814-A	FP-734 FLEXIBLE BOARD, COMPLETE
* 54	3-215-067-01	PLATE (F), GROUND
55	A-1217-971-A	LENS BARRIER UNIT

Ref. No.	Part No.	Description
56	CAUTION	SHEET, BARRIER
* 57	3-219-855-01	SHEET, FR
#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)
#11	3-078-890-11	SCREW, TAPPING (Silver)

5-1-3. LCD PANLE SECTION

ns: not supplied



Note: Reuse the insulating sheet (P) when you exchange the P cabinet (R).

Note: Pキャビネットの交換時は，絶縁シートPを再利用すること。

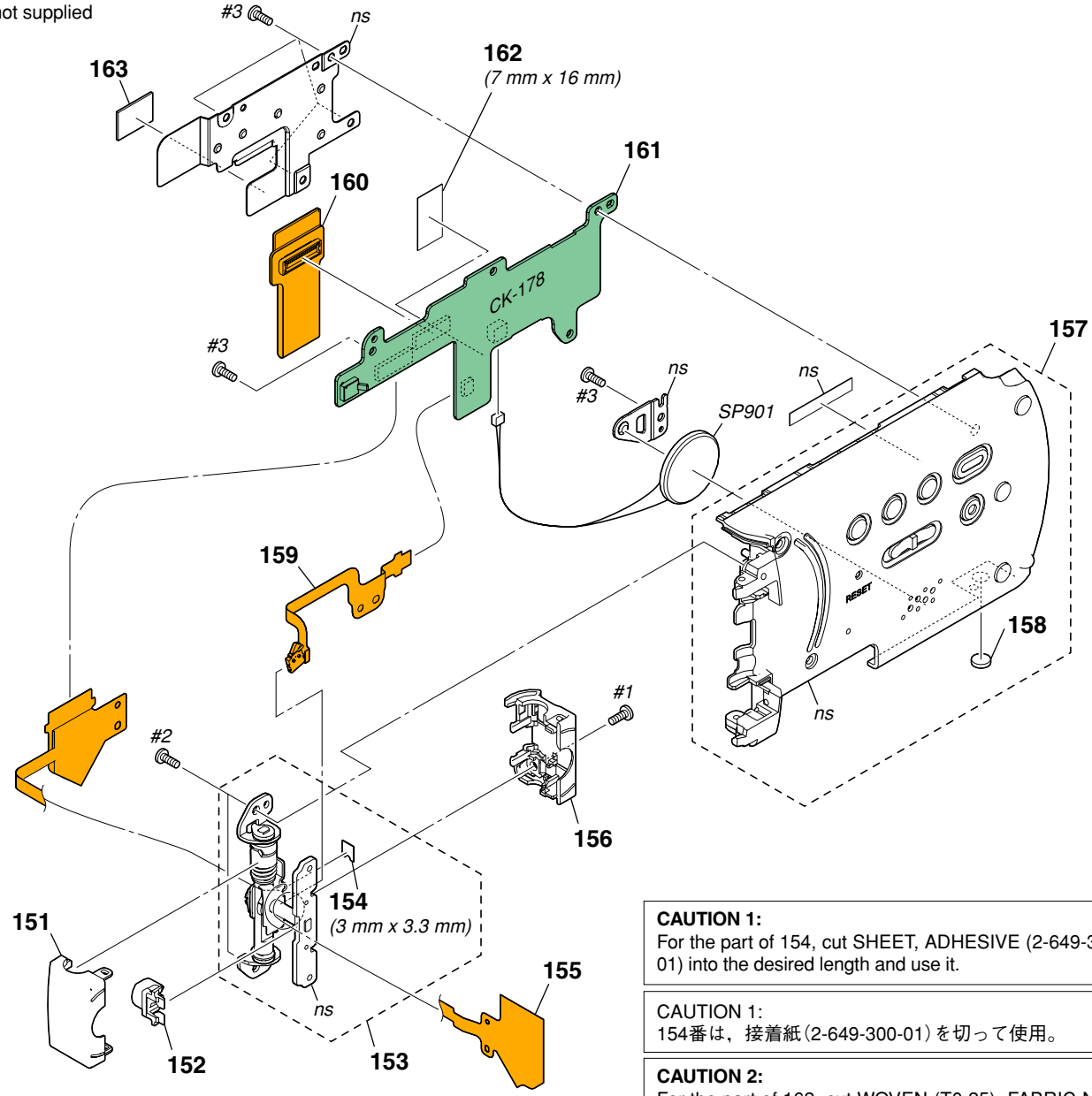
CAUTION:
For the part of 110, cut WOVEN (T0.25), FABRIC NON (3-076-631-01) into the desired length and use it.

CAUTION:
110番は，T0.25ヒメロン(3-076-631-01)を切って使用。

Ref. No.	Part No.	Description
101	3-215-086-01	CABINET (R), P (CX7/CX7E/CX7K/CX7EK) (Note)
101	3-215-086-11	CABINET (R), P (CX6EK) (Note)
102	A-1358-478-A	PD-324 BOARD, COMPLETE
103	2-894-347-01	REFLECTION SHEET (2.7J)
104	2-666-801-01	LIGHT GUIDE (2.7)
105	2-666-804-01	DIFFUSION SHEET (2.7)
106	2-666-803-01	PRISM SHEET H (2.7)
107	2-666-802-01	PRISM SHEET V (2.7)
108	2-887-999-01	FRONT FRAME (2.7J)
109	2-666-807-02	AG SHEET (2.7)
110	CAUTION	SHEET, FLEXIBLE GUARD
* 111	2-638-780-01	CLIP
112	1-480-279-11	SWITCH BLOCK, CONTROL (SB25970)
113	3-215-091-01	CUSHION, TP
114	3-215-092-01	PLATE (P), GROUND
115	3-215-088-01	CABINET (L), P (J)
115	3-215-088-11	CABINET (L), P (EXCEPT J)
* 116	3-272-528-01	SHEET, HINGE
* 117	3-272-529-01	CUSHION (P (3))
* 118	3-272-530-01	CUSHION (P (2))
LCD901	A-1202-059-A	TP BLOCK ASSY (27ESTMG07)
#2	2-635-562-31	SCREW (M1.7) (Black)
#11	3-078-890-11	SCREW, TAPPING (Silver)

5-1-4. CABINET R SECTION

ns: not supplied



CAUTION 1:
For the part of 154, cut SHEET, ADHESIVE (2-649-300-01) into the desired length and use it.

CAUTION 1:
154番は，接着紙(2-649-300-01)を切って使用。

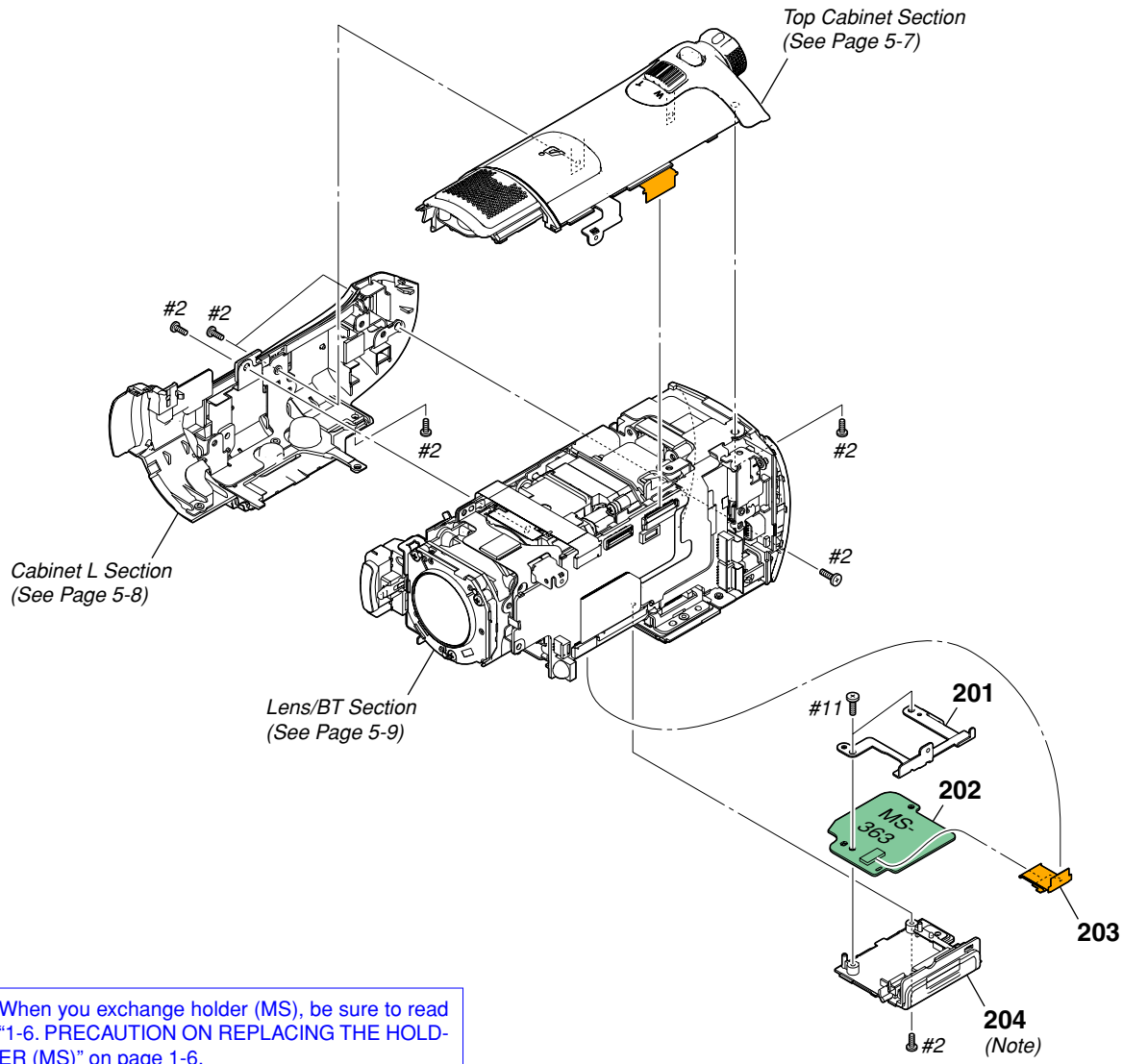
CAUTION 2:
For the part of 162, cut WOVEN (T0.25), FABRIC NON (3-076-631-01) into the desired length and use it.

CAUTION 2:
162番は，T0.25ヒメロン(3-076-631-01)を切って使用。

Ref. No.	Part No.	Description
151	3-215-089-01	COVER (FRONT), HINGE
152	2-668-087-01	CLAMP, FLEXIBLE
153	X-2108-475-1	HINGE ASSY
154	CAUTION 1	SHEET, ADHESIVE, HINGE
155	1-873-336-11	FP-737 FLEXIBLE BOARD
156	3-215-090-01	COVER (REAR), HINGE
157	X-2178-955-1	CABINET (R) ASSY (J)
157	X-2178-972-1	CABINET (R) ASSY (E) (EXCEPT J)
158	2-589-376-01	FOOT (395), RUBBER
159	A-1283-815-A	FP-744 FLEXIBLE BOARD, COMPLETE

Ref. No.	Part No.	Description
160	A-1283-816-A	FP-736 FLEXIBLE BOARD, COMPLETE
161	A-1283-812-A	CK-178 BOARD, COMPLETE
162	CAUTION 2	TAPE (0716)
* 163	3-215-114-01	SHEET (A), CM RADIATION
SP901	1-825-262-82	LOUD SPEAKER (1.6CM)
#1	2-635-562-11	SCREW (M1.7) (Black)
#2	2-635-562-31	SCREW (M1.7) (Black)
#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)

5-1-5. MAIN BODY SECTION



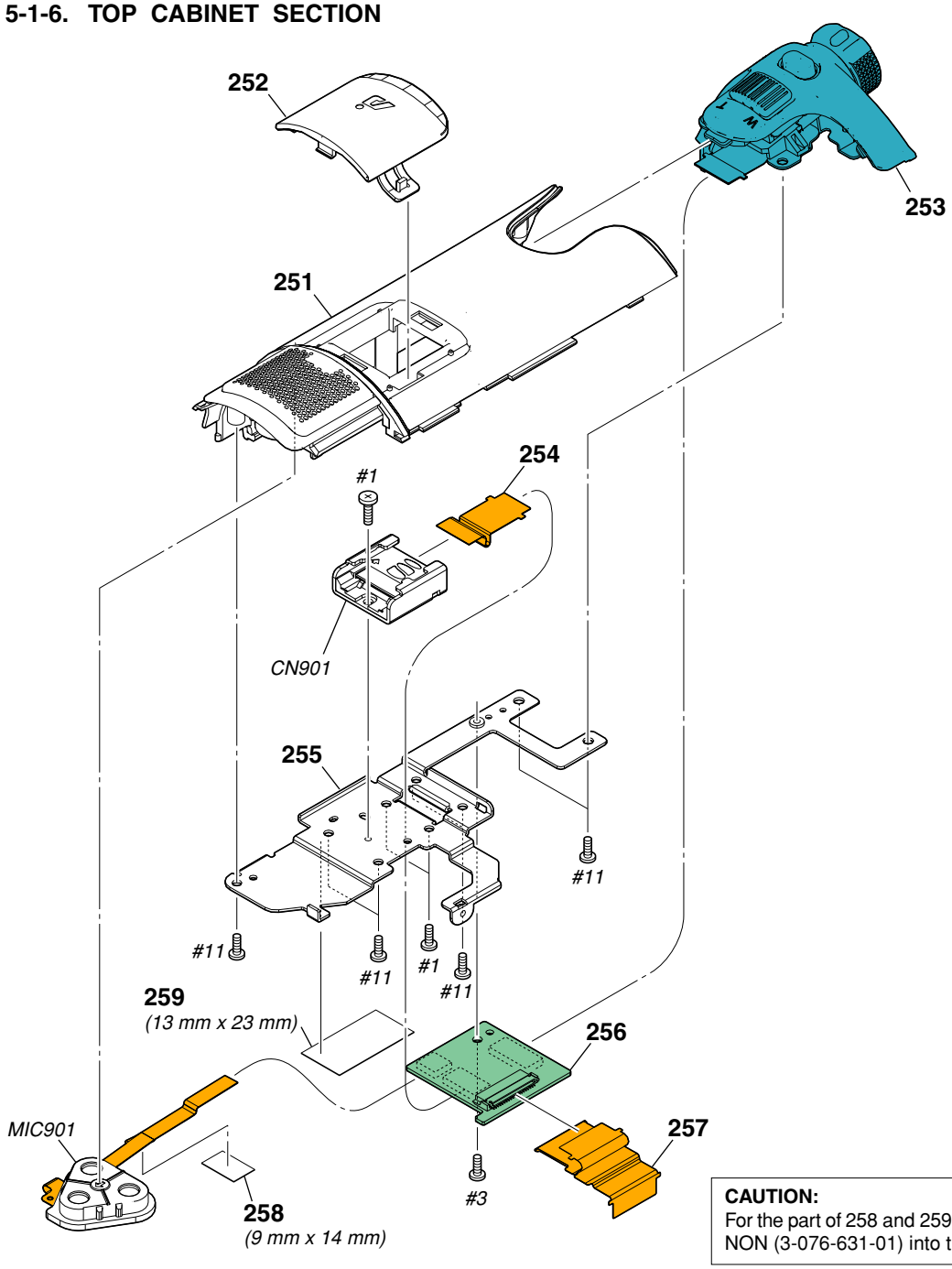
Note: When you exchange holder (MS), be sure to read "1-6. PRECAUTION ON REPLACING THE HOLDER (MS)" on page 1-6.

Note: MSホルダー交換時は1-13ページの"1-6. MSホルダー交換時の注意"を必ずお読みください。

Ref. No.	Part No.	Description
* 201	3-215-113-01	FRAME, MS
202	A-1283-813-A	MS-363 BOARD, COMPLETE
203	1-873-334-11	FP-735 FLEXIBLE BOARD
204	A-1334-454-A	HOLDER (CX7-J1), SERVICE (MS) (CX7: J) (Note)
204	A-1334-455-A	HOLDER (CX7-U2), SERVICE (MS) (CX7: US) (Note)
204	A-1334-456-A	HOLDER (CX7-CA2), SERVICE (MS) (CX7: CND) (Note)
204	A-1334-457-A	HOLDER (CX7E-CN2), SERVICE (MS) (CX7E: CH) (Note)
204	A-1334-458-A	HOLDER (CX7K-E23), SERVICE (MS) (CX7K: E, JE) (Note)
204	A-1334-459-A	HOLDER (CX7K-KR2), SERVICE (MS) (CX7K: KR) (Note)
204	A-1334-460-A	HOLDER (CX7KE-E34), (MS) (CX7EK: E, HK, AUS, JE) (Note)
204	A-1334-461-A	HOLDER (CX7KE-CEN), (MS) (CX7EK: AEP) (Note)
204	A-1334-462-A	HOLDER (CX6EK-CEH), (MS) (CX6EK: AEP, UK) (Note)
#2	2-635-562-31	SCREW (M1.7) (Black)
#11	3-078-890-11	SCREW, TAPPING (Silver)

HARDWARE LIST

5-1-6. TOP CABINET SECTION



CAUTION:
For the part of 258 and 259, cut WOVEN (T0.25), FABRIC NON (3-076-631-01) into the desired length and use it.

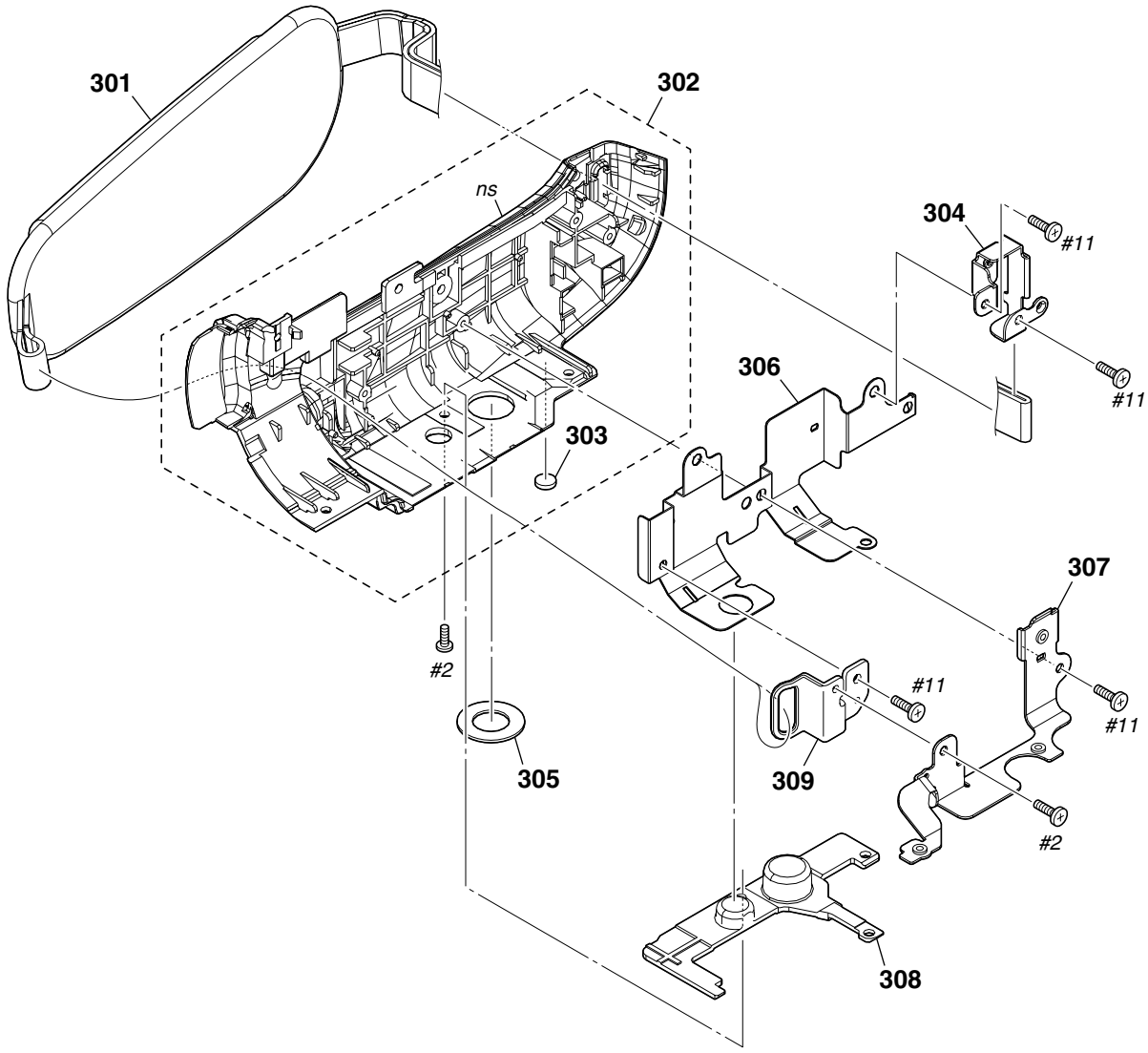
CAUTION:
258，259番は，T0.25ヒメロン（3-076-631-01）を切って使用。

Ref. No.	Part No.	Description
251	X-2178-954-1	CABINET ASSY, TOP
252	3-215-112-01	COVER, SHOE
253	1-480-273-11	SWITCH BLOCK, CONTROL (PS25970) (J)
253	1-480-273-21	SWITCH BLOCK, CONTROL (PS25970) (EXCEPT J)
254	1-873-339-11	FP-740 FLEXIBLE BOARD
* 255	3-215-073-01	FRAME, SHOE
256	A-1283-811-A	PH-002 BOARD, COMPLETE
257	1-873-338-11	FP-739 FLEXIBLE BOARD
258	CAUTION	SHEET, BARRIER
259	CAUTION	SHEET, MIC
CN901	1-818-890-11	CONNECTOR, EXTERNAL (HOT SHOE)
MIC901	1-542-711-11	MICROPHONE UNIT
#1	2-635-562-11	SCREW (M1.7) (Black)
#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)
#11	3-078-890-11	SCREW, TAPPING (Silver)

HARDWARE LIST

5-1-7. CABINET L SECTION

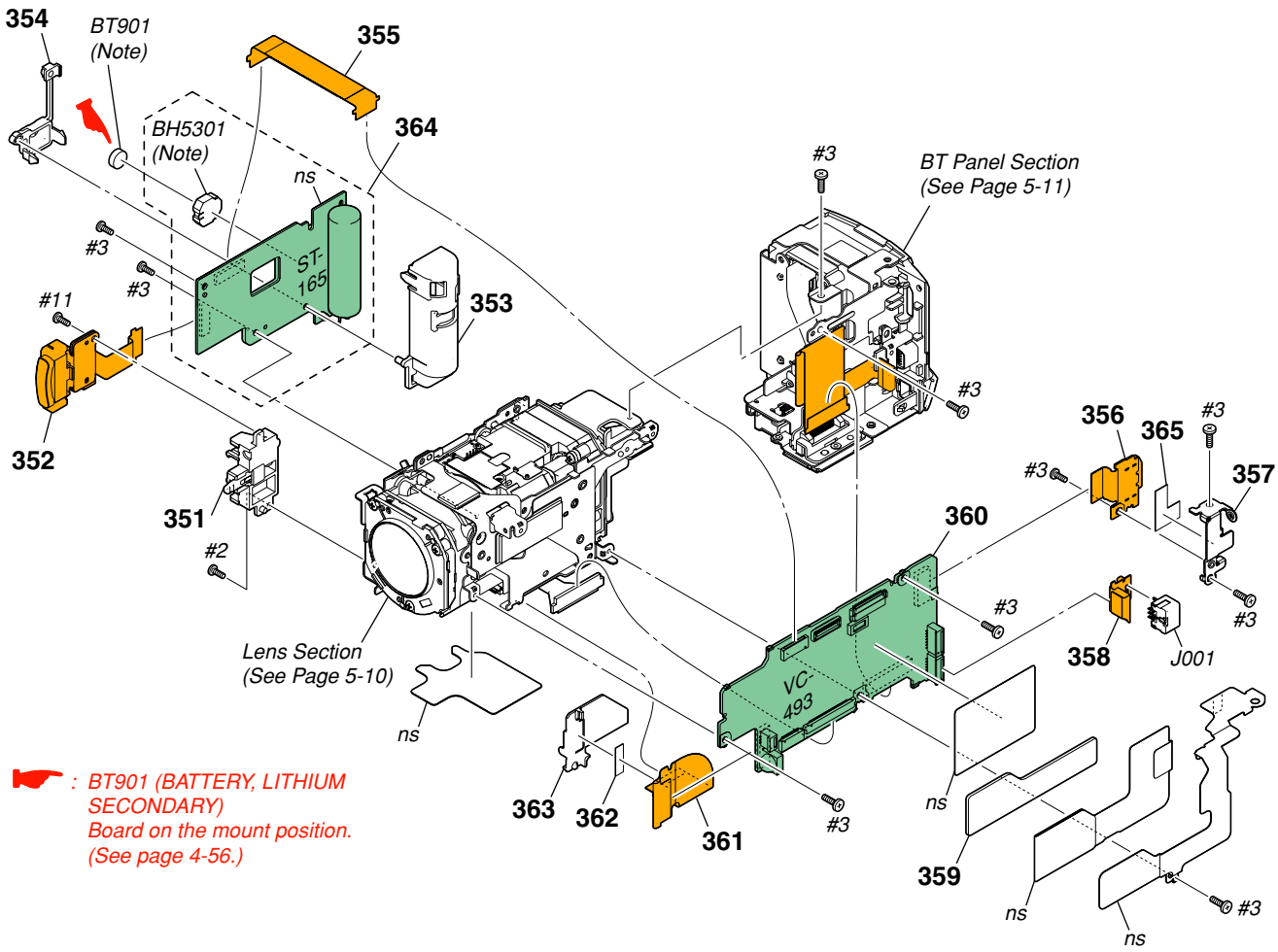
ns: not supplied



Ref. No.	Part No.	Description
301	3-215-104-01	BELT, GRIP
302	X-2178-956-1	CABINET (L) ASSY (J)
302	X-2178-973-1	CABINET (L) ASSY (E) (EXCEPT J)
303	2-589-376-01	FOOT (395), RUBBER
* 304	3-215-106-01	BRACKET (REAR), BELT
305	3-096-396-01	SHEET, TRIPOD
* 306	3-215-109-01	HEAT SINK, L
* 307	3-215-108-01	RETAINER, TRIPOD
308	3-215-107-01	SCREW, TRIPOD
* 309	3-215-105-01	BRACKET (FRONT), BELT
#2	2-635-562-31	SCREW (M1.7) (Black)
#11	3-078-890-11	SCREW, TAPPING (Silver)

5-1-8. LENS/BT SECTION

ns: not supplied



CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

注意
電池の交換は，正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

Note: Replace the battery holder (BH5301) together when replacing the lithium battery (BT901) on the ST-165 board. (The battery holder removed once cannot be used again.)
When mounting these parts, mount new battery holder first and attach new lithium battery next.

Note: ST-165基板のリチウム電池（BT901）を交換する場合はバッテリホルダ（BH5301）も同時に新品に交換して下さい。（一度使用したバッテリホルダは再使用できません。）
部品取り付けの際は，先にバッテリホルダを取り付けてからリチウム電池を装着して下さい。

• Refer to page 5-1 for mark ⚠.

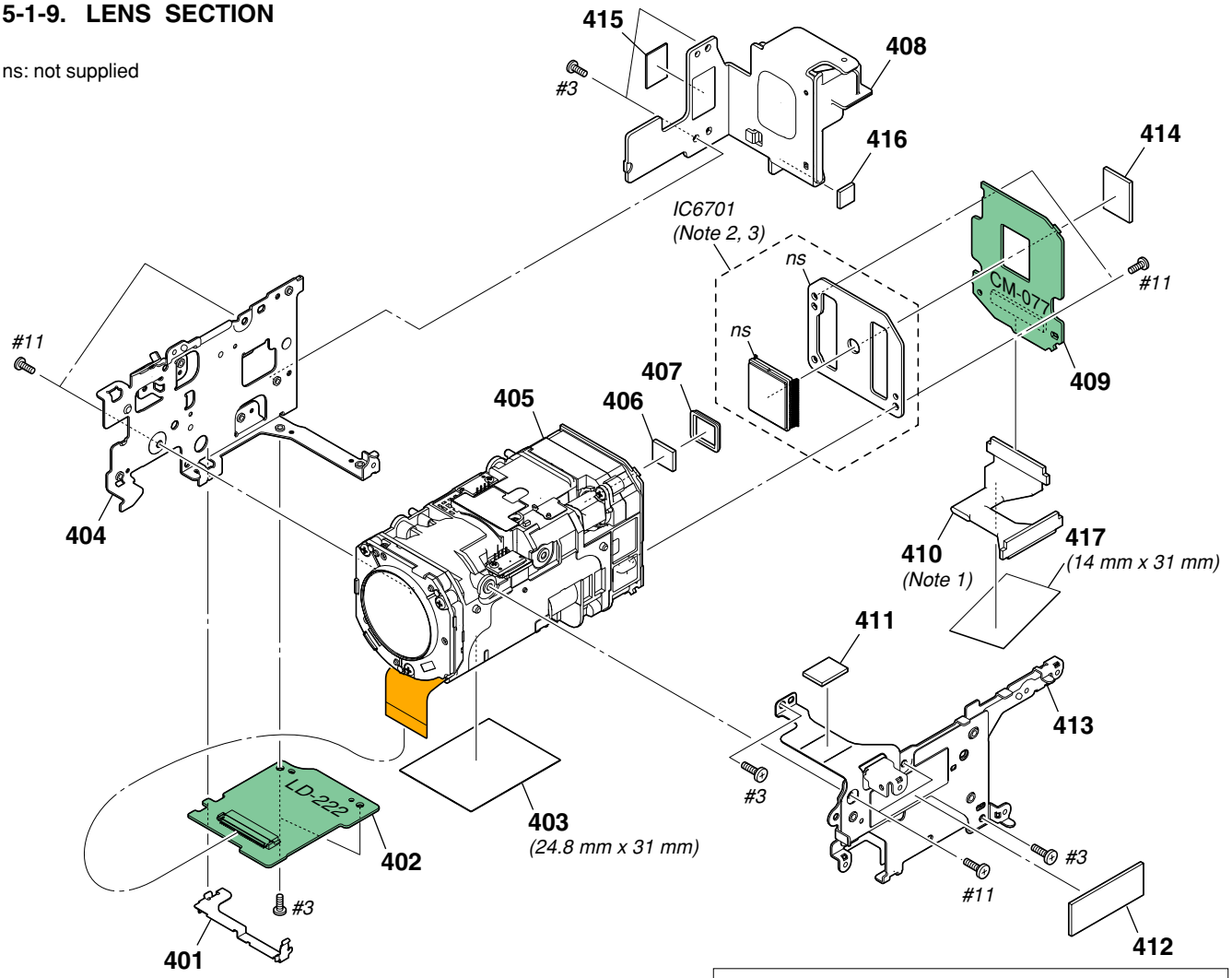
Ref. No.	Part No.	Description
351	X-2176-859-1	HOLDER ASSY, ST
⚠352	1-480-263-21	FLASH UNIT
353	3-215-050-01	HOLDER, CAPACITOR
354	3-215-051-01	CAP, CAPACITOR
355	1-873-340-11	FP-741 FLEXIBLE BOARD
356	A-1283-818-A	FP-745 FLEXIBLE BOARD, COMPLETE
* 357	3-215-057-01	FRAME, JK
358	1-873-330-11	FP-731 FLEXIBLE BOARD
* 359	3-215-116-01	SHEET, VC RADIATION
360	A-1283-995-A	VC-493 BOARD, COMPLETE (SERVICE) (CX7/CX7K)
360	A-1283-996-A	VC-493 BOARD, COMPLETE (SERVICE) (CX7E/CX7EK)
360	A-1283-997-A	VC-493 BOARD, COMPLETE (SERVICE) (CX6EK)
361	1-873-341-11	FP-742 FLEXIBLE BOARD
362	3-215-216-01	SHEET, COVER (FP) ADHESIVE
363	3-215-119-01	COVER (FP)
364	A-1283-810-A	ST-165 BOARD, COMPLETE
365	3-270-979-01	SPACER (HM)
⚠BH5301	1-756-615-31	HOLDER, BATTERY (Note)
⚠BT901	1-756-134-12	BATTERY, STORAGE, LITHIUM (Note)
⚠J001	1-815-792-11	CONNECTOR, DC-IN (7.2V)
#2	2-635-562-31	SCREW (M1.7) (Black)
#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)
#11	3-078-890-11	SCREW, TAPPING (Silver)

5. REPAIR PARTS LIST

HARDWARE LIST

5-1-9. LENS SECTION

ns: not supplied



Note 1: Refer to page 2-1 “Note for disconnecting the harness (coaxial cable)” when changing the harness (coaxial cable).

Note 1: ハーネス（coaxial cable）の交換時は2-1ページの“Note for disconnecting the harness (coaxial cable)”を参照してください。

Note 2: Be sure to read “Precautions for Replacement of Imager” on page 4-2 when changing the imager.

Note 2: イメージャの交換時は4-3ページの“イメージャ交換時の注意”を必ずお読みください。

CAUTION:
For the part of 403 and 417, cut WOVEN (T0.25), FABRIC NON (3-076-631-01) into the desired length and use it.

CAUTION:
403番，417番は，T0.25ヒメロン（3-076-631-01）を切って使用。

Note 3: IC6701 is not supplied, but this is included in CMOS block assy.

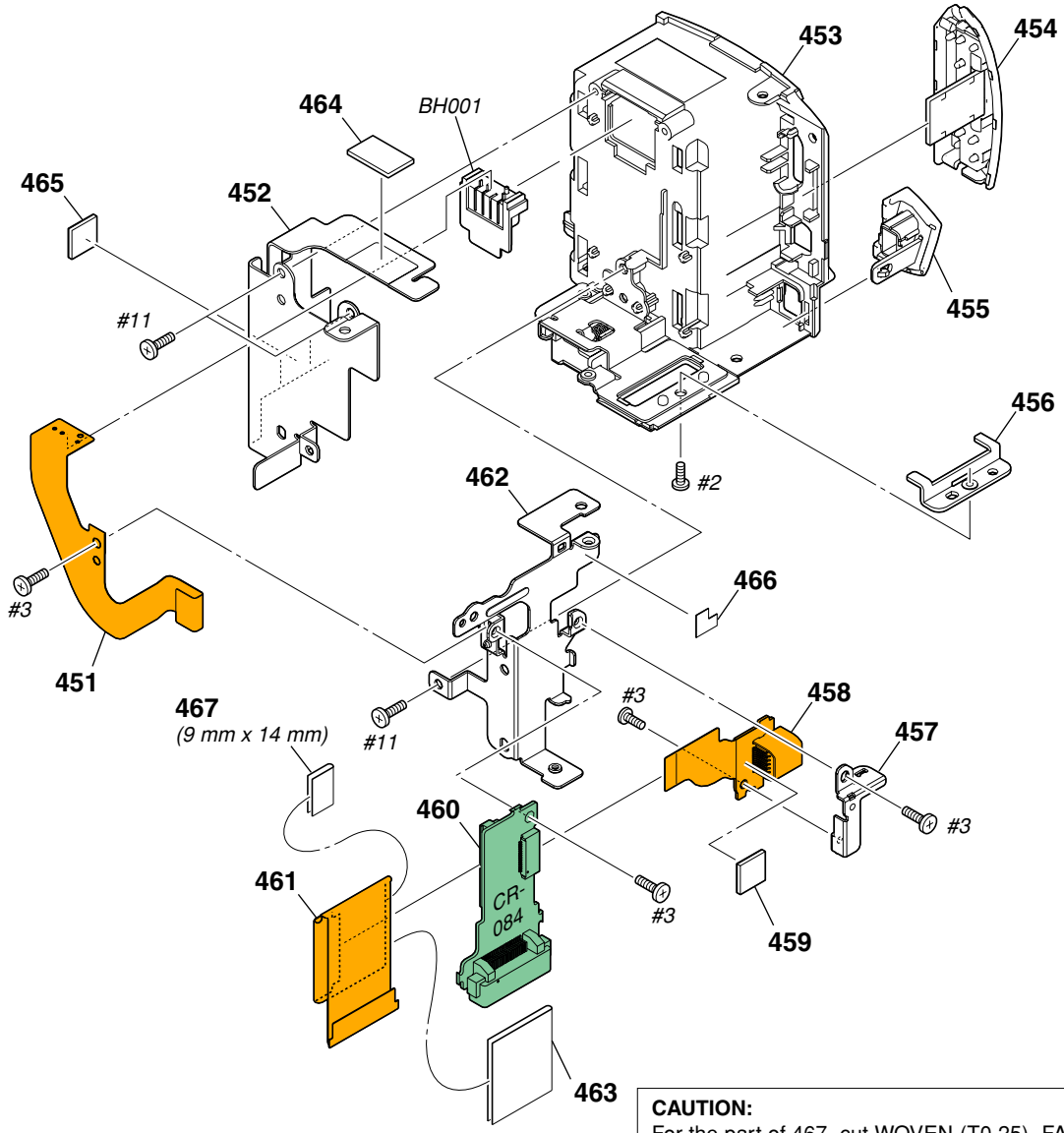
Note 3: IC6701は交換対象ではありませんが，CMOS部組に含まれます。

Ref. No.	Part No.	Description
* 401	3-215-120-01	PLATE (LD), GROUND
402	A-1283-808-A	LD-222 BOARD, COMPLETE
403	CAUTION	SHEET (LF), INSULATING
* 404	X-2178-949-1	FRAME (L) ASSY, LENS
405	A-1227-735-A	LSV-1190A (SERVICE)
406	1-788-558-11	FILTER BLOCK, OPTICAL
407	2-698-010-01	RUBBER (1190), SEAL
* 408	X-2178-951-1	HEAT SINK ASSY, CM
409	A-1237-309-A	CM-077 BOARD, COMPLETE (SERVICE)
410	1-965-256-11	HARNESS (COAXIAL CABLE) (Note 1)
* 411	3-217-389-01	GASKET (MC)

Ref. No.	Part No.	Description
412	3-215-217-01	SHEET, EX RADIATION
* 413	X-2178-950-1	FRAME (R) ASSY, LENS
* 414	3-096-389-01	SHEET (252), CD RADIATION
* 415	3-215-114-01	SHEET (A), CM RADIATION
* 416	3-215-115-01	SHEET (B), CM RADIATION
417	CAUTION	RETAINER, HARNESS
IC6701	A-1209-688-A	CMOS BLOCK ASSY (CMOS IMAGER) (Note 2,3)
#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)
#11	3-078-890-11	SCREW, TAPPING (Silver)

HARDWARE LIST

5-1-10. BT PANEL SECTION



CAUTION:
For the part of 467, cut WOVEN (T0.25), FABRIC NON (3-076-631-01) into the desired length and use it.

CAUTION:
467番は，T0.25ヒメロン(3-076-631-01)を切って使用。

• Refer to page 5-1 for mark ⚠.

Ref. No.	Part No.	Description
451	1-873-332-11	FP-733 FLEXIBLE BOARD
* 452	3-215-055-01	HEAT SINK, BT
453	X-2178-952-1	PANEL ASSY, BT
454	X-2178-958-1	COVER ASSY, JACK
455	3-215-110-01	COVER, DC
* 456	3-215-059-01	FRAME, CR
* 457	3-215-058-01	FRAME, AV
458	A-1283-817-A	FP-738 FLEXIBLE BOARD, COMPLETE
* 459	3-219-758-01	SHEET, AV FLEXIBLE
460	A-1283-809-A	CR-084 BOARD, COMPLETE
461	1-873-342-11	FP-743 FLEXIBLE BOARD

Ref. No.	Part No.	Description
* 462	3-215-056-01	FRAME, BT
* 463	3-217-390-01	SHEET (743), FP
* 464	3-215-114-01	SHEET (A), CM RADIATION
* 465	3-215-115-01	SHEET (B), CM RADIATION
466	3-270-980-01	SPACER (BT)
467	CAUTION	SHEET, BARRIER
⚠BH001	1-780-064-21	BATTERY TERMINAL BOARD
#2	2-635-562-31	SCREW (M1.7) (Black)
#3	2-660-401-01	SCREW (M1.7), NEW TRU-STAR, P2 (Red)
#11	3-078-890-11	SCREW, TAPPING (Silver)

5-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description			
	A-1283-812-A	CK-178 BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
* CN6001	1-816-654-51	FFC/FPC CONNECTOR (LIF) 6P			
CN6002	1-816-926-11	CONNECTOR, BOARD TO BOARD 40P			
* CN6003	1-816-650-51	FFC/FPC CONNECTOR (LIF) 24P			
CN6004	1-778-506-21	PIN, CONNECTOR (PC BOARD) 2P			
		< DIODE >			
D6005	6-500-817-01	DIODE (LED) SML-512UWT86 (ACCESS)			
		< RESISTOR >			
R6004	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R6005	1-218-958-11	RES-CHIP	2.7K	5%	1/16W
R6006	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R6007	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R6008	1-218-967-11	RES-CHIP	15K	5%	1/16W
		< SWITCH >			
S6001	1-771-138-21	SWITCH, KEY BOARD (RESET)			
S6002	1-771-138-21	SWITCH, KEY BOARD (DISP/BATT INFO)			
S6003	1-771-138-21	SWITCH, KEY BOARD (BACK LIGHT)			
S6004	1-771-138-21	SWITCH, KEY BOARD (FILM ROLL INDEX)			
S6007	1-786-148-11	SWITCH, PUSH (1 KEY) (PANEL OPEN/CLOSE)			
S6009	1-771-731-21	SWITCH, SLIDE (NIGHTSHOT)			
S6010	1-771-138-21	SWITCH, KEY BOARD (►)			
S6011	1-771-138-21	SWITCH, KEY BOARD (EASY)			

Electrical parts list of CM-077 board is not shown.
Pages 5-13 is not shown.

Ref. No.	Part No.	Description			
	A-1283-809-A	CR-084 BOARD, COMPLETE			
		**********			
	(CN7303 (interface connector) is not supplied, but this is included in CR-084 complete board.)				
		< CAPACITOR >			
C3003	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V
C3004	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V
C3005	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V
C3008	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
* C3010	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V
* C3011	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V
* C3014	1-112-746-11	CERAMIC CHIP	4.7uF	10%	6.3V
C7301	1-164-933-11	CERAMIC CHIP	220PF	10%	50V
C7302	1-164-933-11	CERAMIC CHIP	220PF	10%	50V
		< CONNECTOR >			
CN7301	1-817-920-11	CONNECTOR, FPC (ZIF) 80P			
* CN7302	1-816-645-51	FFC/FPC CONNECTOR (LIF) 14P			
⚠ CN7303	(Not supplied)	CONNECTOR, MULTIPLE (SOCKET)			
		< FERRITE BEAD >			
FB7311	1-400-927-31	BEAD, FERRITE (1005)			
FB7312	1-400-927-31	BEAD, FERRITE (1005)			
		< IC >			
IC3001	6-708-108-01	IC TLS26A100PFBR			
		< RESISTOR >			
R3018	1-220-169-11	RES-CHIP	75	5%	1/16W
R3019	1-220-169-11	RES-CHIP	75	5%	1/16W
R3020	1-220-169-11	RES-CHIP	75	5%	1/16W
R3021	1-216-864-11	SHORT CHIP	0		
R3022	1-216-864-11	SHORT CHIP	0		
R3023	1-216-864-11	SHORT CHIP	0		
R3024	1-216-864-11	SHORT CHIP	0		
R7311	1-218-990-81	SHORT CHIP	0		
		< VARISTOR >			
VDR311	1-803-974-21	VARISTOR, CHIP	(1608)		
VDR312	1-803-974-21	VARISTOR, CHIP	(1608)		
VDR313	1-803-974-21	VARISTOR, CHIP	(1608)		
VDR314	1-803-974-21	VARISTOR, CHIP	(1608)		
VDR315	1-803-974-21	VARISTOR, CHIP	(1608)		
	1-873-330-11	FP-731 FLEXIBLE BOARD			
		**********			
		(J001 is not included in FP-731 flexible board.)			
		< CONNECTOR >			
⚠ J001	1-815-792-11	CONNECTOR, DC-IN (7.2V)			

Ref. No.	Part No.	Description
	1-873-332-11	FP-733 FLEXIBLE BOARD
		**********
		(BH001 is not included in FP-733 flexible board.)
		< BATTERY TERMINAL >
⚠ BH001	1-780-064-21	BATTERY TERMINAL BOARD
	A-1283-814-A	FP-734 FLEXIBLE BOARD, COMPLETE
		**********
		< DIODE >
D6502	6-500-817-01	DIODE (LED) SML-512UWT86 (CAMERA RECORDING)
		< IC >
IC6503	6-600-163-01	IC RS-770
	A-1283-816-A	FP-736 FLEXIBLE BOARD, COMPLETE
		**********
		< CONNECTOR >
CN1006	1-816-924-11	CONNECTOR BOARD TO BOARD 40P
CN6002	1-816-926-11	CONNECTOR, BOARD TO BOARD 40P
	A-1283-817-A	FP-738 FLEXIBLE BOARD, COMPLETE
		**********
		< CONNECTOR >
CN001	1-815-794-13	CONNECTOR (MULTIPLE) (A/V OUT)
	A-1283-815-A	FP-744 FLEXIBLE BOARD, COMPLETE
		**********
		< SWITCH >
S001	1-786-680-21	SWITCH, DETECTION (SMD) (PANEL REVERSE)
	A-1283-818-A	FP-745 FLEXIBLE BOARD, COMPLETE
		**********
		(CN1001 is not supplied, but this is included in FP-745 flexible complete board.)
		< CONNECTOR >
CN1001	(Not supplied)	CONNECTOR, HDMI (HDMI OUT)

Electrical parts list of LD-222 board is not shown.
Pages 5-15 and 5-16 are not shown.

• Refer to page 5-1 for mark ⚠.

Ref. No.	Part No.	Description			
	A-1283-813-A	MS-363 BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
* CN7401	1-816-645-51	FFC/FPC CONNECTOR (LIF) 14P			
* CN7402	1-819-990-21	MEMORY STICK DUO CONNECTOR 10P			
		< RESISTOR >			
R7401	1-216-864-11	SHORT CHIP	0		
R7403	1-218-990-81	SHORT CHIP	0		
R7404	1-218-990-81	SHORT CHIP	0		
R7405	1-218-990-81	SHORT CHIP	0		
R7406	1-218-990-81	SHORT CHIP	0		
R7407	1-218-990-81	SHORT CHIP	0		
R7408	1-218-990-81	SHORT CHIP	0		
R7409	1-218-945-11	RES-CHIP	220	5%	1/16W
R7410	1-218-945-11	RES-CHIP	220	5%	1/16W
R7411	1-218-945-11	RES-CHIP	220	5%	1/16W
R7412	1-218-945-11	RES-CHIP	220	5%	1/16W
R7413	1-218-945-11	RES-CHIP	220	5%	1/16W
		< SWITCH >			
S7401	1-786-680-21	SWITCH, DETECTION (SMD) (MS COVER OPEN/CLOSE)			

Ref. No.	Part No.	Description			
	A-1358-478-A	PD-324 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C6101	1-100-581-81	CERAMIC CHIP	0.0047uF	10%	50V
C6102	1-100-581-81	CERAMIC CHIP	0.0047uF	10%	50V
C6103	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C6105	1-127-895-91	TANTAL. CHIP	22uF	20%	4V
C6107	1-165-884-91	CERAMIC CHIP	2.2uF	10%	6.3V
C6108	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C6109	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C6111	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C6112	1-100-786-91	TANTAL. CHIP	22uF	20%	6.3V
C6113	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C6114	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C6115	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
* C6116	1-112-298-91	CERAMIC CHIP	1uF	10%	16V
* C6117	1-112-298-91	CERAMIC CHIP	1uF	10%	16V
C6119	1-127-760-11	CERAMIC CHIP	4.7uF	10%	6.3V
C6120	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C6121	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C6123	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C6124	1-100-567-81	CERAMIC CHIP	0.01uF	10%	25V
C6125	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C6126	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
		< CONNECTOR >			
* CN6101	1-785-905-51	FFC/CONNECTOR, FPC (ZIF) 24P			
* CN6102	1-794-322-51	FFC/CONNECTOR, FPC (ZIF) 6P			
* CN6103	1-794-322-51	FFC/CONNECTOR, FPC (ZIF) 6P			
* CN6105	1-785-905-51	FFC/CONNECTOR, FPC (ZIF) 24P			

Ref. No.	Part No.	Description			
		< DIODE >			
D6105	6-500-941-01	DIODE MAZS056008S0			
* D6106	6-501-597-01	DIODE NSSW008DT-T108 (BACKLIGHT)			
* D6107	6-501-597-01	DIODE NSSW008DT-T108 (BACKLIGHT)			
* D6108	6-501-597-01	DIODE NSSW008DT-T108 (BACKLIGHT)			
		< FERRITE BEAD >			
FB6101	1-400-331-11	FERRITE, EMI (SMD) (1005)			
		< IC >			
IC6102	8-753-229-98	IC CXM3006CR-T4			
		< COIL >			
L6101	1-400-588-11	INDUCTOR	10uH		
L6102	1-400-588-11	INDUCTOR	10uH		
L6103	1-400-588-11	INDUCTOR	10uH		
		< TRANSISTOR >			
Q6101	8-729-427-37	TRANSISTOR	XP411F-TXE		
Q6102	8-729-427-67	TRANSISTOR	XP421F-TXE		
Q6107	6-550-239-01	TRANSISTOR	DTA144EMT2L		
Q6108	6-550-234-01	TRANSISTOR	UNR32A300LS0		
Q6109	6-551-184-01	TRANSISTOR	MCH6305-TL-E-S		
Q6110	8-729-054-48	TRANSISTOR	UP04601008S0		
Q6111	6-550-232-01	TRANSISTOR	2SA2029T2LQ/R		
Q6112	8-729-054-49	TRANSISTOR	UP04401008S0		
Q6113	8-729-054-48	TRANSISTOR	UP04601008S0		
		< RESISTOR >			
R6101	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R6102	1-218-955-11	RES-CHIP	1.5K	5%	1/16W
R6104	1-218-990-81	SHORT CHIP	0		
R6105	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R6109	1-218-975-11	RES-CHIP	68K	5%	1/16W
R6110	1-218-949-11	RES-CHIP	470	5%	1/16W
R6112	1-208-934-11	METAL CHIP	91K	0.5%	1/16W
R6115	1-208-911-11	METAL CHIP	10K	0.5%	1/16W
R6122	1-218-965-11	RES-CHIP	10K	5%	1/16W
R6130	1-208-898-81	METAL CHIP	3K	0.5%	1/16W
R6132	1-218-969-11	RES-CHIP	22K	5%	1/16W
R6133	1-218-977-11	RES-CHIP	100K	5%	1/16W
R6134	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R6135	1-218-981-11	RES-CHIP	220K	5%	1/16W
R6136	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R6137	1-218-978-11	RES-CHIP	120K	5%	1/16W
R6138	1-218-977-11	RES-CHIP	100K	5%	1/16W
R6139	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W
R6140	1-208-691-11	METAL CHIP	2.2K	0.5%	1/16W
R6141	1-208-683-11	METAL CHIP	1K	0.5%	1/16W
R6142	1-208-691-11	METAL CHIP	2.2K	0.5%	1/16W
R6143	1-218-977-11	RES-CHIP	100K	5%	1/16W
R6144	1-211-969-11	METAL CHIP	10	0.5%	1/10W
R6145	1-218-989-11	RES-CHIP	1M	5%	1/16W
R6152	1-218-990-81	SHORT CHIP	0		
R6153	1-218-990-81	SHORT CHIP	0		
R6154	1-218-990-81	SHORT CHIP	0		
R6155	1-216-864-11	SHORT CHIP	0		

Ref. No.	Part No.	Description			
	A-1283-811-A	PH-002 BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
* CN7601	1-817-544-71	CONNECTOR, FPC (ZIF) 39P			
* CN7602	1-816-654-51	FFC/FPC CONNECTOR (LIF) 6P			
* CN7603	1-816-645-51	FFC/FPC CONNECTOR (LIF) 14P			
* CN7604	1-816-647-51	FFC/FPC CONNECTOR (LIF) 18P			
		< TRANSISTOR >			
Q7601	6-550-237-01	TRANSISTOR	2SC5658T2LQ/R		
Q7602	6-550-237-01	TRANSISTOR	2SC5658T2LQ/R		
Q7603	6-550-237-01	TRANSISTOR	2SC5658T2LQ/R		
		< RESISTOR >			
R7601	1-218-965-11	RES-CHIP	10K	5%	1/16W
R7602	1-218-965-11	RES-CHIP	10K	5%	1/16W
R7603	1-218-965-11	RES-CHIP	10K	5%	1/16W
R7607	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R7608	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R7609	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R7619	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R7620	1-218-964-11	RES-CHIP	8.2K	5%	1/16W
R7621	1-218-941-81	RES-CHIP	100	5%	1/16W
R7622	1-218-945-11	RES-CHIP	220	5%	1/16W
R7623	1-218-953-11	RES-CHIP	1K	5%	1/16W
	A-1283-810-A	ST-165 BOARD, COMPLETE			
		**********			
		(BT901 (lithium battery) is not included in ST-165 complete board.)			
		< BATTERY HOLDER >			
⚠ BH5301	1-756-615-31	HOLDER, BATTERY (Note)			
		< BATTERY >			
⚠ BT901	1-756-134-12	BATTERY, STORAGE, LITHIUM (Note)			
		< CAPACITOR >			
C5201	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5202	1-125-889-91	CERAMIC CHIP	2.2uF	10%	10V
C5203	1-165-875-11	CERAMIC CHIP	10uF	10%	10V
C5204	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
⚠* C5206	1-112-730-11	ELECT	70uF		330V
		< CONNECTOR >			
* CN5201	1-816-647-51	FFC/FPC CONNECTOR (LIF) 18P			
* CN5202	1-816-647-51	FFC/FPC CONNECTOR (LIF) 18P			
		< DIODE >			
D5201	6-501-096-01	DIODE CRF02 (TE85R)			
⚠ D5202	6-501-096-01	DIODE CRF02 (TE85R)			
D5204	8-719-083-91	DIODE EDZ TE61 6.8B			
		< IC >			
⚠ IC5201	6-707-554-01	IC TPS65552DGQR			

• Refer to page 5-1 for mark ⚠.

Ref. No.	Part No.	Description			
		< COIL >			
L5201	1-412-027-11	INDUCTOR	2.2uH		
		< TRANSISTOR >			
⚠* Q5201	6-551-447-01	TRANSISTOR	TIG022TS-S-TL-E		
		< RESISTOR >			
R5201	1-208-947-11	METAL CHIP	330K	0.5%	1/16W
R5202	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R5203	1-216-864-11	SHORT CHIP	0		
R5204	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R5205	1-216-809-11	METAL CHIP	100	5%	1/10W
R5206	1-218-989-11	RES-CHIP	1M	5%	1/16W
		< TRANSFORMER >			
⚠ T5201	1-443-568-21	TRANSFORMER, D.C.-D.C.CONVERTER			

Electrical parts list of VC-493 board is not shown.
Pages 5-19 to 5-25 are not shown.

CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

注意
電池の交換は，正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

Note: Replace the battery holder (BH5301) together when replacing the lithium battery (BT901) on the ST-165 board. (The battery holder removed once cannot be used again.)
When mounting these parts, mount new battery holder first and attach new lithium battery next.

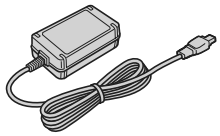
Note: ST-165基板のリチウム電池（BT901）を交換する場合はバッテリホルダ（BH5301）も同時に新品に交換して下さい。（一度使用したバッテリホルダは再使用できません。）
部品取り付けの際は，先にバッテリホルダを取り付けてからリチウム電池を装着して下さい。

Ver. 1.2 2007.11
The changed portions from
Ver. 1.1 are shown in blue.

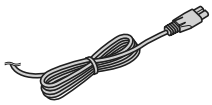
• EXCEPT J MODEL

Checking supplied accessories. **to J MODEL**

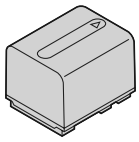
Note: This item is supplied with the unit as an accessory, but is not prepared as a service part.



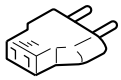
AC Adaptor
(AC-L200/L200B)
* Compatible in L200 and L200B.
⚠ 1-479-285-21



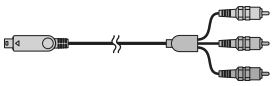
Power Cord
⚠ 1-790-107-61 (US, CND)
⚠ 1-833-892-21 (KR)
⚠ 1-824-910-71 (AEP, E: PAL)
⚠ 1-555-074-91 (AUS)
⚠ 1-792-549-41 (JE)
⚠ 1-834-852-11 (E: NTSC)
⚠ 1-832-121-31 (CH)
⚠ 1-827-269-12 (UK, HK)



Rechargeable Battery Pack
(NP-FH60)
⚠ A-1201-666-A (US, CND)
⚠ A-1201-667-A
(EXCEPT US, CND, CH)
⚠ A-1201-668-A (CH)

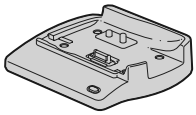


Conversion (2P) Adaptor
⚠ 1-569-007-12
(E: NTSC, JE)



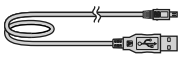
Component Video Cable
1-829-414-61

A/V Connecting Cable
1-823-156-51



Handycam Station
(DCRA-C191)
1-821-282-21

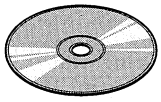
21-pin Adaptor
1-770-783-21
(AEP, UK)



USB Cable
1-829-868-31

Wireless Remote Commander
(RMT-835)
1-479-275-41

Memory Stick PRO Duo (4GB)
(HDR-CX6EK/CX7K/CX7EK) (Note)

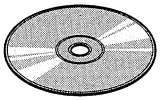


DVD-ROM
"ENJOY HANDYCAM"
3-093-691-01 (KR)
ENGLISH/KOREAN/JAPANESE
3-093-691-11 (US, CND)
ENGLISH/FRENCH/SPANISH/PORTUGUESE
3-093-691-21 (UK)
ENGLISH/RUSSIAN/GERMAN
3-093-691-51 (AEP)
ENGLISH/FRENCH/GERMAN/DUTCH/
PORTUGUESE/ITALIAN/RUSSIAN
3-093-691-61 (E, HK, AUS, CH)
ENGLISH/FRENCH/SIMPLIFIED CHINESE for CHINA/
TRADITIONAL CHINESE for HONG KONG
3-093-691-71 (E)
ENGLISH/TRADITIONAL CHINESE for TAIWAN/
SPANISH/PORTUGUESE

• Refer to page 5-1 for mark ⚠.

Ver. 1.2 2007.11
The changed portions from
Ver. 1.1 are shown in blue.

Operating Guide
3-214-660-11 (ENGLISH) (CX7: US, CND/CX7K: E, JE)
3-214-660-21 (FRENCH) (CX7: CND)
3-214-660-31 (SPANISH) (CX7: US/CX7K: E, JE)
3-214-660-41 (PORTUGUESE) (CX7K: JE)
3-214-660-51 (TRADITIONAL CHINESE) (CX7K: E)
3-214-660-61 (KOREAN) (CX7K: KR, JE)
3-214-661-12 (ENGLISH) (CX6EK/CX7EK: AEP, E, HK, AUS, JE)
3-214-661-21 (FRENCH, DUTCH) (CX6EK: AEP/CX7EK: AEP)
3-214-661-31 (GERMAN, ITALIAN, TURKISH) (CX6EK: AEP/CX7EK: AEP)
3-214-661-41 (SPANISH, POLISH, GREEK) (CX6EK: AEP/CX7EK: AEP)
3-214-661-51 (RUSSIAN, SWEDISH) (CX6EK: AEP/CX7EK: AEP, JE)
3-214-661-61 (DANISH, FINNISH, POLISH) (CX6EK: AEP/CX7EK: AEP)
3-214-661-71 (CZECH, HUNGARIAN, SLOVAK) (CX6EK: AEP/CX7EK: AEP)
3-214-661-82 (SIMPLIFIED CHINESE) (CX7E/CX7EK: E, JE)
3-214-662-31 (TRADITIONAL CHINESE) (CX7EK: HK)
3-214-662-41 (ARABIC, PERSIAN) (CX7EK: E)



CD-ROM
“Handycam Application Software”
(“Picture Motion Browser (Software)”/
“Picture Motion Browser Guide”/
“Handycam Handbook (PDF)”)
3-214-682-02

Handycam Handbook (PDF)

The CD-ROM supplied contains all of language version of the Handycam Handbook (PDF) for printing.
・The printed matter is not supplied. If required, please order it with the part number below.
・(Only for destination Japanese model)
日本国内については日本語のみが印刷での部品供給可能です。

HDR-CX7
3-214-656-01 (JAPANESE)

HDR-CX7/CX7K
3-214-656-11 (ENGLISH)
3-214-656-21 (FRENCH)
3-214-656-31 (SPANISH)
3-214-656-41 (PORTUGUESE)
3-214-656-51 (TRADITIONAL CHINESE)
3-214-656-61 (KOREAN)

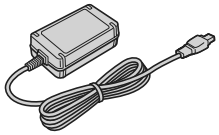
HDR-CX6EK/CX7E/CX7EK
3-214-657-11 (ENGLISH)
3-214-657-21 (FRENCH)
3-214-657-31 (GERMAN)
3-214-657-41 (DUTCH)
3-214-657-51 (TURKISH)
3-214-657-61 (SPANISH)
3-214-657-71 (PORTUGUESE)
3-214-657-81 (ITALIAN)
3-214-657-91 (GREEK)
3-214-658-11 (RUSSIAN)
3-214-658-21 (SWEDISH)
3-214-658-31 (DANISH)
3-214-658-41 (FINNISH)
3-214-658-51 (POLISH)
3-214-658-61 (CZECH)
3-214-658-71 (HUNGARIAN)
3-214-658-81 (SLOVAK)
3-214-658-91 (SIMPLIFIED CHINESE)
3-214-659-11 (THAI)
3-214-659-21 (INDONESIAN)
3-214-659-31 (MALAY)
3-214-659-41 (TRADITIONAL CHINESE)
3-214-659-51 (ARABIC)
3-214-659-61 (PERSIAN)

Ver. 1.2 2007.11

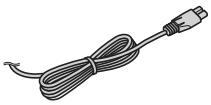
Ver. 1.1からの変更部分は
青色で記載されています。

• J MODEL

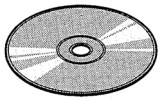
付属品



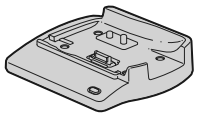
AC アダプター
（AC-L200/L200B）
＊L200とL200Bには
互換性があります。
⚠ 1-479-285-21



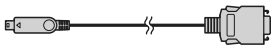
電源コード
⚠ 1-792-549-41



DVD-ROM
「エンジョイハンディカム」
3-093-691-01
英語/韓国語/日本語



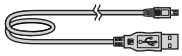
ハンディカムステーション
(DCRA-C190)
1-821-282-11



D端子コンポーネント
ビデオケーブル
1-829-414-11

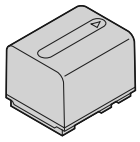
AV 接続ケーブル
1-823-156-51

取扱説明書
3-214-660-01 (日本語)

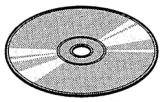


USB ケーブル
1-829-868-31

ワイヤレスリモコン
（RMT-835）
1-479-275-31



リチャージャブル
バッテリーパック
（NP-FH60）
⚠ A-1201-665-A



CD-ROM
「Handycam Application Software」
（「Picture Motion Browser」（ソフトウェア）/
「Picture Motion Browserガイド」/
「ハンディカム　ハンドブック」（PDF））
3-214-682-02

ハンディカム　ハンドブック (PDF)

印刷用のハンディカム　ハンドブック（PDF）は
全ての言語が付属品のCD-ROMに含まれています。
・印刷物は付属されておりません。
必要な場合は下記部品番号にて注文となります。

3-214-656-01 (日本語)

• ⚠マークについては，5-1ページを参照して下さい。

HDR-CX6EK/CX7/CX7E/CX7K/CX7EK
RMT-835

SONY

LEVEL 2

SERVICE MANUAL

Ver. 1.2 2007.11

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Hong Kong Model
Chinese Model
Korea Model
Tourist Model
Japanese Model

SUPPLEMENT-1

File this supplement with the service manual.
(DI07-196)

- **Addition of Attention Sentence of HELP**
- **Change of Repair Parts**
- **Revision of Accessories**

Note: Please refer to Ver.1.2 of SERVICE MANUAL (9-852-210-32) for the revision of accessories.

☞ **: Points added portion.**

• Addition of Attention Sentence of HELP

HELP

Sheet attachment positions and procedures of processing the flexible boards/harnesses are shown.

THE METHOD OF ATTACHMENT OF FP-737 FLEXIBLE BOARD

☞ ⑧ Install the hinge cover (front) in the hinge cover (rear).
Note: Avoid it so as not to nip the flexible board, and lock four claws while covering with the hinge cover (front) straight.

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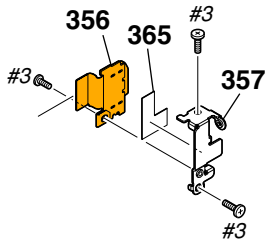
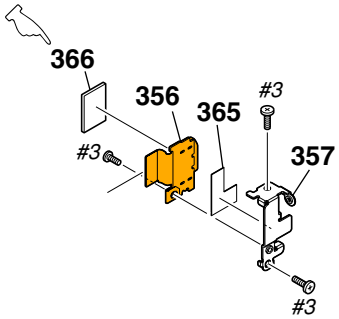
Published by Kohda TEC

☞ : **Points added portion.**

• Change of Repair Parts

5. REPAIR PARTS LIST

5-1. EXPLODED VIEWS

Page	Former	New
5-5	Ref. No. Part No. Description 156 3-215-090-01 COVER (REAR), HINGE	Ref. No. Part No. Description 156 3-215-090-02 COVER (REAR), HINGE
5-9	 ⚠BT901 1-756-134-12 BATTERY, STORAGE, LITHIUM (Note)	 * 366 3-219-660-01 SPACER (DC) ⚠BT901 1-528-900-31 BATTERY, LITHIUM SECONDARY (Note)
5-11	454 X-2178-958-1 COVER ASSY, JACK	454 X-2178-958-5 COVER ASSY, JACK

5-2. ELECTRICAL PARTS LIST

Page	Former	New
5-17	Ref. No. Part No. Description A-1358-478-A PD-324 BOARD, COMPLETE ********** < CONNECTOR > * CN6101 1-785-905-51 FFC/CONNECTOR, FPC (ZIF) 24P * CN6105 1-785-905-51 FFC/CONNECTOR, FPC (ZIF) 24P	Ref. No. Part No. Description A-1358-478-A PD-324 BOARD, COMPLETE ********** < CONNECTOR > * CN6101 1-819-913-71 CONNECTOR, FPC (ZIF) 24P * CN6105 1-819-913-71 CONNECTOR, FPC (ZIF) 24P
5-18	A-1283-810-A ST-165 BOARD, COMPLETE ********** (BT901 (lithium battery) is not included in ST-165 complete board.) < BATTERY > ⚠BT901 1-756-134-12 BATTERY, STORAGE, LITHIUM (Note)	A-1283-810-A ST-165 BOARD, COMPLETE ********** (BT901 (lithium battery) is not included in ST-165 complete board.) < BATTERY > ⚠BT901 1-528-900-31 BATTERY, LITHIUM SECONDARY (Note)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。
従って交換時は，必ず指定の部品を使用して下さい。

CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

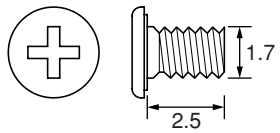
注意
電池の交換は，正しく行わないと破裂する恐れがあります。電池を交換する場合には必ず同じ型名の電池又は同等品と交換してください。

Note: Replace the battery holder (BH5301) together when replacing the lithium battery (BT901) on the ST-165 board. (The battery holder removed once cannot be used again.)
When mounting these parts, mount new battery holder first and attach new lithium battery next.

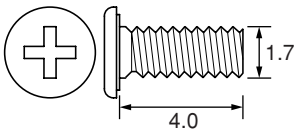
Note: ST-165基板のリチウム電池（BT901）を交換する場合はバッテリホルダ（BH5301）も同時に新品に交換して下さい。（一度使用したバッテリホルダは再使用できません。）
部品取り付けの際は，先にバッテリホルダを取り付けてからリチウム電池を装着して下さい。

HARDWARE LIST (1/4)

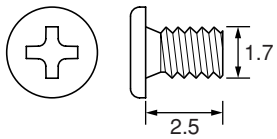
#1: M1.7 X 2.5
(Black)
2-635-562-11



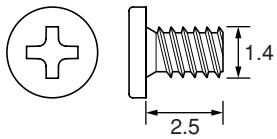
#2: M1.7 X 4.0
(Black)
2-635-562-31



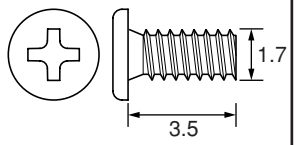
#3: M1.7 X 2.5
(Red)
2-660-401-01



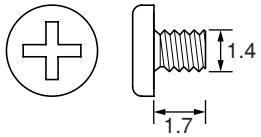
#4: M1.4 X 2.5 (Tapping)
(Dark Silver)
3-348-998-81



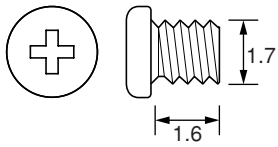
#5: M1.7 X 3.5 (Tapping)
(Black)
3-080-204-01



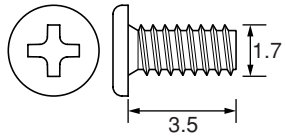
#6: M1.4 X 1.7
(Silver)
2-598-474-01



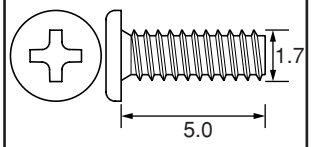
#7: M1.7 X 1.6
(Black)
7-627-552-18



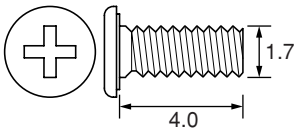
#8: M1.7 X 3.5 (Tapping)
(Silver)
3-078-890-01



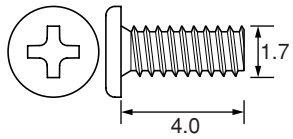
#9: M1.7 X 5.0 (Tapping)
(Silver)
3-078-890-21



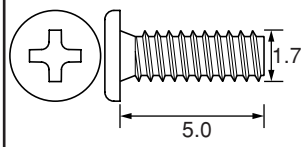
#10: M1.7 X 4.0
(Silver)
2-599-475-31



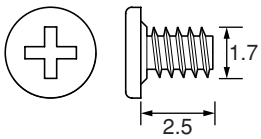
#11: M1.7 X 4.0 (Tapping)
(Silver)
3-078-890-11



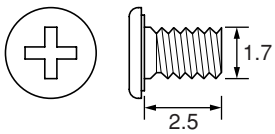
#12: M1.7 X 5.0 (Tapping)
(Black)
3-080-204-21



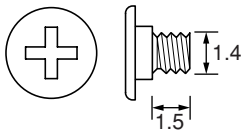
#13: M1.7 X 2.5 (Tapping)
(Silver)
3-085-397-01



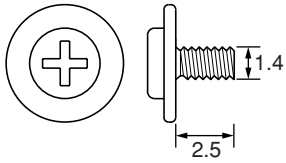
#14: M1.7 X 2.5
(Silver)
2-599-475-11



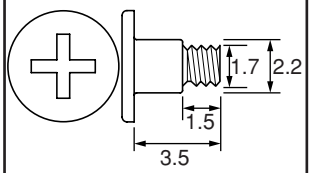
#15: M1.4 X 1.5
(Silver)
3-062-214-01



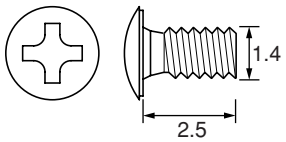
#16: M1.4 X 2.5
(Silver)
2-586-337-01



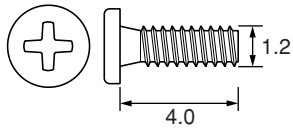
#17: M1.7 X 1.5
(Silver)
2-586-389-01



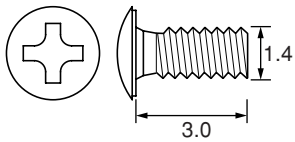
#18: M1.4 X 2.5
(Silver)
2-635-591-21



#19: M1.2 X 4.0 (Tapping)
(Red)
3-086-156-21

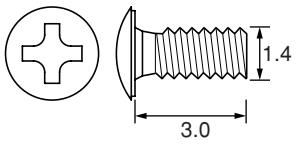


#20: M1.4 X 3.0
(Silver)
2-635-591-31

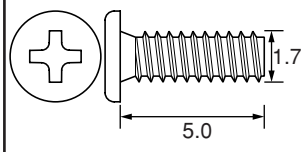


HARDWARE LIST (2/4)

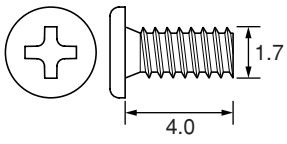
#21: M1.4 X 3.0
(Black)
2-662-396-21



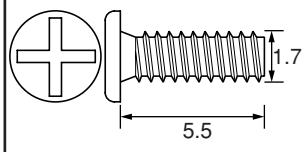
#22: M1.7 X 5.0 (Tapping)
(Silver)
3-083-261-01



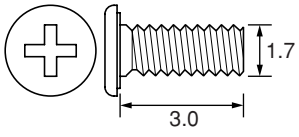
#23: M1.7 X 4.0 (Tapping)
(Black)
3-080-204-11



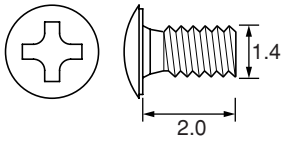
#24: B1.7 X 5.5 (Tapping)
(Black)
4-679-805-11



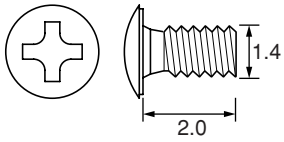
#25: M1.7 X 3.0
(Black)
2-635-562-21



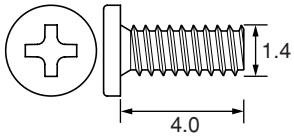
#26: M1.4 X 2.0
(Silver)
2-635-591-11



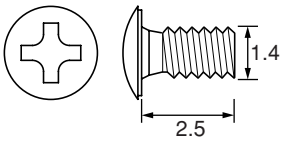
#27: M1.4 X 2.0
(Black)
2-662-396-11



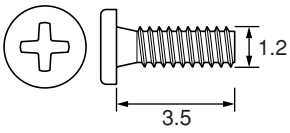
#28: M1.4 X 4.0 (Tapping)
(Dark Silver)
3-348-998-61



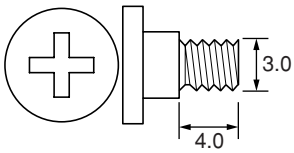
#29: M1.4 X 2.5
(Black)
2-662-396-01



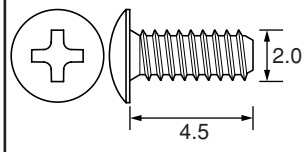
#30: M1.2 X 4.0 (Tapping)
(White)
3-086-156-11



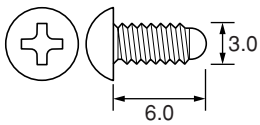
#31: M3.0 X 4.0
(Silver)
2-102-434-01



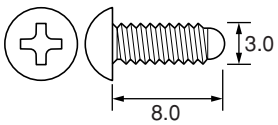
#32: M2.0 X 4.5 (Tapping)
(Silver)
2-102-498-01



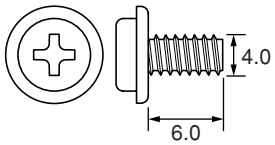
#33: M3.0 X 6.0
(Silver)
3-077-331-21



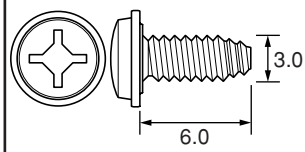
#34: M3.0 X 8.0
(Black)
3-077-331-41



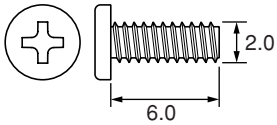
#35: M4.0 X 6.0 (Tapping)
(Silver)
3-975-291-02



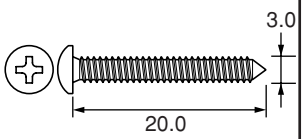
#36: M3.0 X 6.0
(Silver)
4-886-821-11



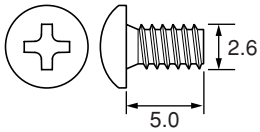
#37: M2.0 X 6.0 (Tapping)
(Black)
3-080-206-31



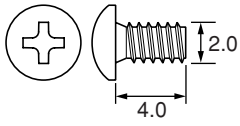
#38: M3.0 X 20.0 (Tapping)
(Silver)
7-685-651-79



#39: M2.6 X 5.0 (Tapping)
(Black)
7-685-791-09



#40: M2.0 X 4.0 (Tapping)
(Silver)
7-685-851-04



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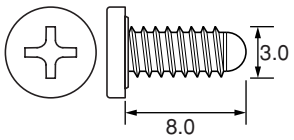
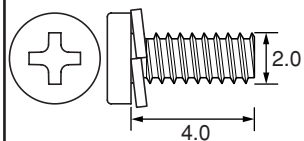
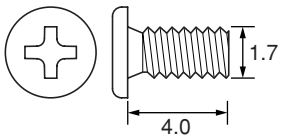
#41: M3.0 X 8.0 (Tapping)
(Silver)
3-065-748-01



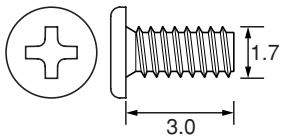
#42: M2.0 X 4.0 (Tapping)
(Silver)
7-628-253-00



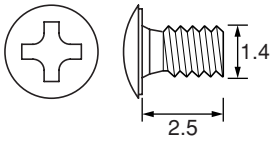
#43: M1.7 X 4.0
(Red)
2-660-401-31



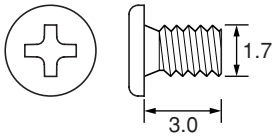
#44: M1.7 X 3.0 (Tapping)
(Silver)
3-078-890-61



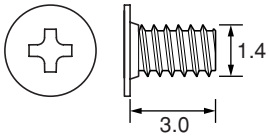
#45: M1.4 X 2.5
(Silver)
2-587-151-01



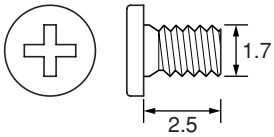
#46: M1.7 X 3.0
(Red)
2-660-401-11



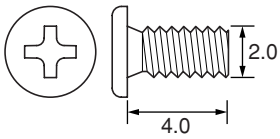
#47: M1.4 X 3.0 (Tapping)
(Silver)
2-665-774-01



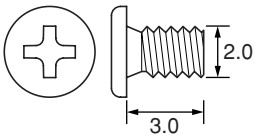
#48: M1.7 X 2.5
(Silver)
3-973-497-91



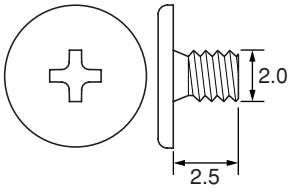
#49: M2.0 X 4.0
(Black)
2-630-005-31



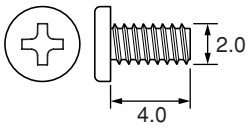
#50: M2.0 X 3.0
(Red)
2-891-494-11



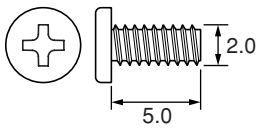
#51: M2.0 X 2.5
(Silver)
3-073-686-01



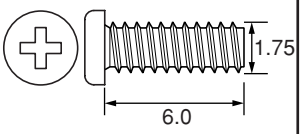
#52: M2.0 X 4.0 (Tapping)
(Black)
3-080-206-11



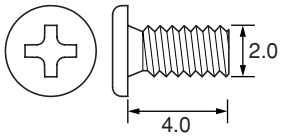
#53: M2.0 X 5.0 (Tapping)
(Black)
3-080-206-21



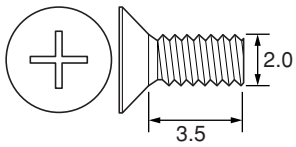
#54: M1.75 X 6.0 (Tapping)
(Black)
3-318-203-11



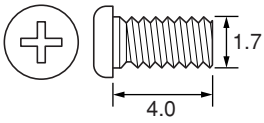
#55: M2.0 X 4.0
(Silver)
2-655-582-11



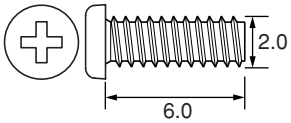
#56: M2.0 X 3.5
(Silver)
3-067-187-11



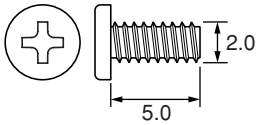
#57: M1.7 X 4.0
(Black)
7-627-852-18



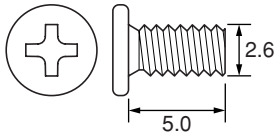
#58: M2.0 X 6.0 (Tapping)
(Silver)
3-719-408-11



#59: M2.0 X 5.0 (Tapping)
(Silver)
3-080-205-21

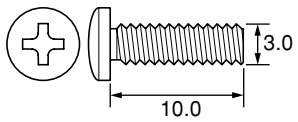


#60: M2.6 X 5.0
(Black)
3-061-062-11

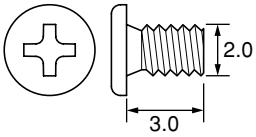


HARDWARE LIST (4/4)

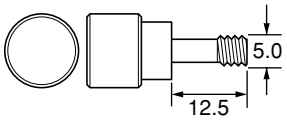
#61: M3.0 X 10.0
(Black)
7-682-549-09



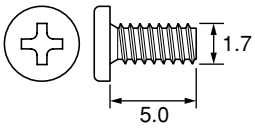
#62: M2.0 X 3.0
(Silver)
3-080-202-21



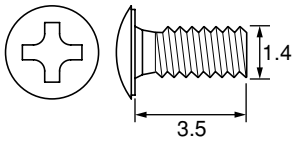
#63: M5.0 X 12.5
(Black)
3-060-811-21



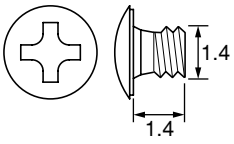
#64: M1.7 X 5.0 (Tapping)
(Silver)
2-666-551-21



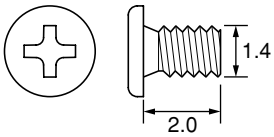
#65: M1.4 X 3.5
(Silver)
2-635-591-01



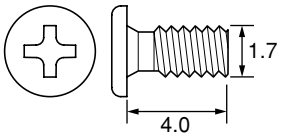
#66: M1.4 X 1.4
(Silver)
2-635-591-41



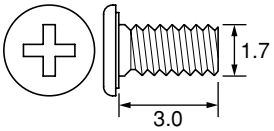
#67: M1.4 X 2.0
(Silver)
3-389-523-16



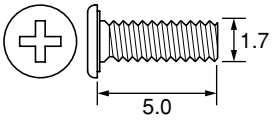
#68: M1.7 X 4.0
(Silver)
2-655-581-01



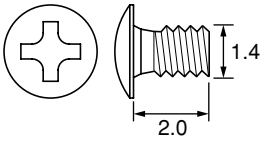
#69: M1.7 X 3.0
(Silver)
2-599-475-21



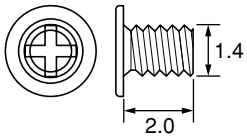
#70: M1.7 X 5.0
(Silver)
2-599-475-41



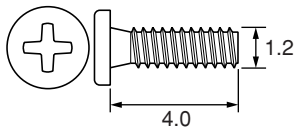
#71: M1.4 X 2.0
(Red)
3-208-537-01



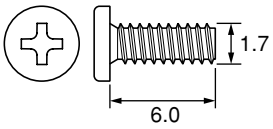
#72: M1.4 X 2.0
(Silver)
4-663-621-41



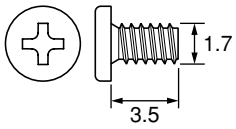
#73: M1.2 X 4.0 (Tapping)
(Black)
3-086-156-61



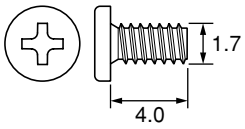
#74: M1.7 X 6.0 (Tapping)
(Silver)
2-666-551-31



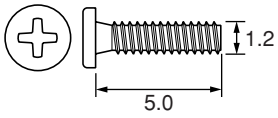
#75: M1.7 X 3.5 (Tapping)
(Silver)
2-666-551-01



#76: M1.7 X 4.0 (Tapping)
(Silver)
2-666-551-11



#77: M1.2 X 5.0 (Tapping)
(Silver)
3-086-156-31



Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2007.06	Official Release	—	—
1.1	2007.07	Revised-1	• Correction of Schematic Diagrams • Addition of CMOS Imager's Note • Correction of Accessories S.M. correction: Page 4-37, Page 4-38, Page 5-10, Page 5-27, Page 5-28	Yes
1.2	2007.11	Supplement-1 (S1 DI07-196)	• Addition of Attention Sentence of HELP • Change of Repair Parts • Revision of Accessories S.M. revised: Page 5-26, Page 5-27, Page 5-28	Yes